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Initial Education of Secondary Teachers in China and Spain: A Comparative Study under an International Perspective.

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ABSTRACT

The achievement of full rates of enrolment in primary education in China and Spain has progressively led to national policies that include junior secondary education as basic and compulsory. This has gradually opened access to senior secondary education to the majority of the population. At present, the access of the masses to senior secondary education is assumed as the regular path for most students, though it is not part of compulsory education.

This progression entails a large demand of teachers for both levels, and a pull between quality and quantity. Due to teacher shortages and lack of time to prepare them, teachers' initial education programmes have traditionally been of low quality and uneven standards, varying with each university. This dynamic of noxious feedback between teachers with low preparation, a high social demand for teachers and scarce structures of teacher education, has for years affected the importance that national policies placed on initial teacher education for secondary teachers, as well as the status of teachers and the professionalization of the role.

Over the past few decades, besides dealing with this development and expansion, secondary teachers' initial education has had to confront numerous challenges in both countries. Teacher education programmes have had to adapt to modern technologies and to the changes within their own societies, to globalization, international organizations' agendas, quality assessments or countries' membership of supranational organizations hence needing to adhere to certain requirements and principles, and so forth. On one side, Spain became a member of the European Union and reformed its tertiary education to match the European Higher Education Area guidelines. On the other, China started opening up to the international field and modernized its whole education system.

In addition, secondary teachers' initial education has had to reinvent itself and cope with a new labour paradigm where the transmission of knowledge is only a negligible part of teachers' responsibilities. In this setting, teaching professionals are bound to develop certain professional competencies necessary to manage a wider range of abilities, knowledge, tools and strategies. Nevertheless, official programmes and social and education needs often develop in uneven rhythms. The combination of these elements makes the topic of this dissertation a relevant issue in current national, supranational and international policies and agendas.

In the complexity of this context, this research pursues three general objectives:

- General Objective 1: To understand and analyse, under a contextualized framework, the main elements of secondary teachers' initial education systems in two countries: China and Spain.
- General Objective 2: To detect convergences and divergences between Chinese and Spanish secondary teachers' initial education systems, as well as possible international trends and guidelines in secondary teachers' initial education.
- General Objective 3: To propose possible reforms in the Spanish model of teachers' initial education in the context of the international trends detected.

In particular, the study was carried out using a comparative methodology to explore how each country plans their programmes in terms of institutions and paths, curriculum design, professional competencies, qualifications and student selection.

Besides this, the research analyses both countries' tendencies, and triangulates the results with supranational and international quality guidelines. Qualitative and quantitative indicators, mainly from primary sources, were organized following the steps of the comparative education method (identification of the problem and hypotheses, delimitation of the research, description and interpretation, juxtaposition and comparison, and application). The organization of the comparison categories, parameters and indicators is shown in the methodology chapter.

The thesis is organized in eight chapters revolving around the General Objectives, following a symmetrical structure between chapters, sections and subsections. The first chapter introduces the topic, justifies its significance and offers a general overview of the structure of the thesis. The second explains the methodological approach, establishing the hypotheses, research objectives and questions. The third analyses the main notions and key elements of the study, reviews relevant literature and links this study to teachers' status, professionalization and identity, intrinsic components of the teaching profession. This chapter also tackles the concept of quality from an international and supranational point of view.

The fourth chapter describes the general context of each country, detailing the general educative system, secondary education system, role of families, students and teachers, and the academic relationship between the two countries. Chapter Five defines and applies the key concepts of the specific units of analysis. It starts with a historical introduction on teachers' initial education in both countries and examines contemporary dilemmas.

Then, the study discusses secondary teachers' initial education, including a section on legislation and a section for each of the comparison categories in relation to secondary teachers' education (institutions and paths, curriculum design, professional competencies, qualifications and student selection). Finally, it includes a selection of international and supranational quality indicators regarding the problem of the study.

Chapters Six and Seven present and contextualize the juxtaposition of the research when contrasting data from both national contexts and international plans.

On one hand, Chapter Six tackles general settings and highlights the divergences and convergences in teachers' working conditions, not only in terms of salaries, but in tasks and time distribution, and the time students invest in education and their academic results. For example, some of the findings illustrate the great challenges for China to manage such a large territory and population, with lower salaries for its citizens and where salaries for its teachers principally depend on the geographical area. In contrast, Spain has higher average and minimum salaries, but a higher unemployment rate. Despite these difficulties both nations allocate a similar percentage of their GDP to education.

On the other hand, Chapter Seven focuses on secondary teachers' initial education and mainly stress a high level of harmonization in Spain and high flexibility in China. Both countries show a tendency towards the increment of pedagogy credits in the curriculum and the conceptualization of teachers' initial education as a first step to further harmonizing their career development. Both countries give high relevance to teachers' competencies and in both nations, student selection is only linked to the students' academic results at a previous stage. The findings also demonstrate how most of the national policies in these two countries are aligned with international and supranational suggestions.

The last chapter presents a summary of the findings in terms of conclusions, including a practical application with recommendations for Spain. After the conclusions and application is a section on the potentials and limits of the research as well as some proposals for further research agendas.

The practical application of the findings is categorized in terms of the comparative categories of the research. For example, in institutions and paths the study recommends higher flexibility to open the career to different profiles but stresses the importance of keeping the degree in tertiary education; in curriculum design, the proposals are on rethinking national guidelines, increasing the practicum and length of the degree, and the reorganization of subjects and fields; in professional competencies, for the sake of consistency between

education legislation and teachers' professional careers, dimensions that could be encouraged are, for instance, lifelong learning, teachers' identity and social responsibility; in relation to teachers' qualification, the study proposals are to take into account other professional experience or reconsidering the possibility to grant a specialization in one of the two stages of secondary education; and in the last section, the selection of students for secondary teachers' initial education programmes, the proposals stress more comprehensive dynamics that could help to select appropriate candidates and to create a pool of teachers with a strong identity.

Keywords: teachers' initial education, China, Spain, international standards, education policies.

论文摘要

随着中国和西班牙的初等教育实现全面入学，其中等教育政策发生了相应变革：初中教育已具备了基础性和义务性的特征，高中教育虽为非义务教育，但接受高中教育日趋普遍。这一变革对教师培养提出了新的要求，随即教师数量和质量之间的冲突开始出现。由于教师教育师资的短缺以及时间的紧迫性，教师职前教育的质量出现下滑，质量标准参差不齐，对中学教师教育的重要性、教师的职业地位以及教师的职业化都带来了一定程度的负面影响。

除了教师数量的扩展之外，过去几十年来中国和西班牙的中学教师教育都面临其他挑战，即必须适应现代技术的发展和社会需求的变化，其中全球化的影响、对国际组织事务的参与、教师质量评估的实施、作为跨国组织的成员等，都要求对教师教育做出相应改革。西班牙作为欧盟的成员国之一，实施了以“欧洲教育行动区”为指导的高等教育改革；而中国的整个教育体系开始越来越现代化，并逐渐向世界开放。

此外，中学教师职前教育必须做出调整以适应新的劳动力市场的需求，即知识的传递仅仅成为教师职责一部分。在此背景下，教师教育亟需培养必要的能力以满足诸多职业责任的要求。然而，教育制度的变革和社会需求的变化往往不同步。基于上述原因，本文的研究对于目前的国家、跨国以及世界三个层面的教师教育政策都具有一定的意义。

本研究主要有三个目标：

1. 从现实背景出发分析和讨论中国和西班牙的中等教师教育制度；

2. 分析中国和西班牙教师教育制度的异同，并总结中等教师教育发展的国际趋势；

3. 在以上分析的基础上，为西班牙教师职前教育改革提出建议。

本研究使用比较研究方法，探索中国和西班牙教师教育制度的制定，包括制度和方针课程设计、职业能力建构、教师资格认定和招生等方面。除此之外，本研究将国家层面的研究结果与跨国以及世界的教师教育质量趋势相结合，进行国

家、跨国和世界三个层面的分析。本研究遵循提出问题和假设——界定——描述和阐释——比较以及应用的比较研究方法，通过对原始文献进行分析，总结教师教育的数量和质量标准。

根据研究目标本文共分八章。

导论部分指出了本研究的主题、意义以及论文的结构和基本观点。

第二章对研究方法做了说明，提出了研究假设、研究目标和研究问题。

第三章阐释了主要概念和内容，并对教师职业地位、职业化和身份认同等与教师教育相关的关键文献做了分析，并从跨国的视角对“质量”做了概念解析。

第四章讨论了中国和西班牙的教育概况，对教育制度、中等教育制度、家庭在教育中的角色、学生与教师的关系等。

第五章从两国的教师教育的历史演变和当前困境开始，界定了中国和西班牙中等教育的关键概念。最后根据本文的研究需要对跨国质量指标做了筛选。

第六章分析了中国和西班牙教师教育的现实背景，重点从教师收入、任务和时间分配、学生的学习时间及其学习成绩等几个方面讨论了教师工作环境的异同。中国所面临的最大挑战是幅员辽阔、人口众多，平均收入较低，但是教师收入存在交大的地区差异；西班牙的教师平均收入较高且有最低工资保障，但失业率也较高。两国教育支出所占 GDP 的比例相近。

第七章分析了中等教师职前教育并指出了两国的差异：西班牙的教师职前教育具备高度的一致性，而中国则具有高度的灵活性。两国在教师职前教育的课程设置中都增加了教育学类课程的学分，都将教师职前教育作为未来教师职业发展的初始阶段。两国都非常重视教师的职业能力，并且依据学生前一阶段的学业成绩招生。两国的大部分教育政策都与跨国组织的政策建议保持同步。

第八章对研究结果做了总结，并根据研究框架对西班牙的教师教育改革提出了建议。在制度和路径方面，教师教育可以招收具有不同背景的生源，但需保持在高等教育水平；在课程设计方面，重新检讨国家的教师职前教育课程标准，增加实践教学和教学时数、重新组织学科体系；在职业能力方面，为了保持教育立

法和教师职业之间的一致性，需鼓励终身学习、教师的职业认同塑造以及公民责任的培养；在教师资格方面，可以认可其他职业经历，并在初中和高中两个教师职前教育阶段做出区分；在招生方面扩大行动面，以求遴选更为合适的生源，并能塑造其强烈的教师职业认同。

关键词：教师教育、中国教育、西班牙教育、中国西班牙教育比较

RESUMEN

La universalización de la educación primaria, tanto en China como en España, ha derivado progresivamente en políticas educativas nacionales que incluyen la etapa de educación secundaria inferior en lo considerado como educación básica y obligatoria. A su vez, este hecho ha ido paulatinamente abriendo la etapa de educación secundaria superior para la mayoría de la sociedad. Actualmente, el acceso de las masas a la etapa de educación secundaria superior es asumido como la trayectoria habitual de la mayoría los alumnos, aunque no pertenezca a la educación obligatoria.

Esta progresión ha conllevado una gran demanda de docentes en los dos niveles, y un reto que abordar entre calidad y cantidad. Debido a la falta de docentes y de tiempo para formarles, los programas de formación inicial del profesorado han presentado tradicionalmente planes de baja calidad que se regían por estándares desiguales según la universidad. Esta nociva dinámica de retroalimentación entre docentes poco preparados, alta necesidad social de docentes y escasas estructuras de formación, ha afectado durante años a la importancia que las políticas nacionales otorgaban a la formación inicial de los profesores de secundaria, así como al status de los profesores y a su profesionalización.

En las últimas décadas, además de lidiar con este desarrollo y expansión, la formación inicial de los docentes de educación secundaria ha tenido que enfrentarse, en ambos países, a números retos. Estos programas han tenido que adaptarse a las nuevas tecnologías y a los cambios producidos en sus respectivas sociedades, a la globalización, a agendas de organizaciones internacionales, a evaluaciones de calidad y, a requisitos y principios adoptados por organizaciones supranacionales (para los países pertenecientes a una), etc. Por una parte, España paso a ser miembro de la Unión Europea y reformó su educación terciaria en consonancia con el Espacio Europeo de Educación Superior. Por otra, China comenzó su apertura hacia el ámbito internacional y modificó todo su sistema educativo.

Además, la formación de profesores de educación secundaria ha tenido que reinventarse y hacer frente a un nuevo paradigma de trabajo donde la trasmisión del conocimiento es sólo una ínfima parte de las responsabilidades del profesor. En este escenario, los profesionales de la enseñanza están abocados a desarrollar ciertas competencias profesionales necesarias para manejar una gama más amplia de habilidades, conocimientos, herramientas y estrategias. Sin embargo, los programas oficiales y las necesidades sociales y educativas con frecuencia se desarrollan a ritmos descoordinados. La combinación de estos elementos hace que el tema

de esta tesis doctoral sea relevante en las políticas y agendas a nivel nacional, supranacional e internacional.

En la complejidad de este contexto, la investigación persigue tres objetivos generales:

- Objetivo general 1: entender y analizar, bajo un marco contextualizado, los principales elementos de los sistemas de educación inicial de los profesores de secundaria en dos países: China y España.

- Objetivo general 2: detectar convergencias y divergencias entre el sistema de formación inicial del profesorado de secundaria en China y en España, así como las posibles tendencias internacionales en la formación inicial del profesorado de secundaria.

- Objetivo general 3: proponer posibles reformas en el modelo español de formación inicial de los profesores de secundaria en el contexto de las tendencias internacionales detectadas.

En particular, el estudio se ha llevado a cabo utilizando una metodología comparada para explorar cómo planifica cada país sus programas en términos de instituciones y vías de formación, diseño curricular, competencias profesionales, titulaciones y selección de estudiantes.

Además, la investigación analiza las tendencias de los dos países y triangula los resultados con las directrices de calidad de organizaciones supranacionales e internacionales. Los indicadores cualitativos y cuantitativos, extraídos sobre todo de fuentes primarias, se han organizado en función de las fases del método de educación comparada (identificación del problema e hipótesis, delimitación de la investigación, descripción e interpretación, yuxtaposición y comparación y, aplicación). La organización en categorías de comparación, parámetros e indicadores se muestra en la metodología.

La tesis está organizada en ocho capítulos que giran en torno a los objetivos generales, siguiendo una estructura simétrica entre los capítulos, secciones y subsecciones. El primer capítulo introduce el tema, justifica su importancia, y aporta una visión general de la estructura de la tesis. El segundo explica el enfoque metodológico, y establece las hipótesis, los objetivos y las preguntas de investigación. En el tercero se analizan los conceptos y elementos fundamentales del estudio, se revisa la literatura relevante y se relaciona esta investigación con el status, la profesionalización y la identidad de los docentes, como componentes intrínsecos a la profesión. También en este capítulo se aborda el concepto de calidad desde un punto de vista internacional y supranacional.

En el cuarto capítulo se describe ampliamente cada contexto general del país, detallando el sistema educativo general, el sistema de educación secundaria, el papel de las familias, de los estudiantes y de los profesores, y la relación académica entre ambos países. En el capítulo cinco se definen y aplican los conceptos clave de las unidades específicas de análisis. Se inicia con una introducción histórica sobre la formación inicial de los profesores en los dos países y los dilemas contemporáneos. Después se aborda la formación inicial de los docentes de educación secundaria, incluyendo una sección de legislación y una sección por cada categoría de comparación en relación a la formación de los docentes de secundaria (instituciones y vías de formación, diseño curricular, competencias profesionales, titulaciones y selección de estudiantes). Por último, se desarrolla la selección de indicadores de calidad internacional y supranacional con respecto al problema del estudio.

Los capítulos seis y siete presentan y contextualizan la yuxtaposición de la investigación al contrastar los datos de ambos contextos nacionales y los planes internacionales.

Por un lado, el capítulo seis desarrolla los aspectos generales, y pone de relieve las divergencias y convergencias sobre las condiciones de trabajo de los docentes, no sólo en relación con los salarios, sino también en las tareas y la distribución del tiempo, y el tiempo que los estudiantes invierten en su educación, así como sus resultados académicos. Por ejemplo, algunos de los hallazgos ilustran los desafíos a los que tiene que enfrentarse China para gestionar un gran territorio y población, donde los ciudadanos suelen tener salarios más bajos y donde el sueldo de los profesores depende principalmente de la zona geográfica. En contraste, España tiene salarios medios y mínimos más altos, pero más alto porcentaje de desempleo. A pesar de estas dificultades ambas naciones asignan un porcentaje similar de su PIB a la educación.

Por otro, el capítulo siete se centra en la formación inicial del profesorado de secundaria y principalmente revela un alto grado de armonización en España y una alta flexibilidad en China. Ambos países muestran una tendencia hacia el incremento de los créditos de pedagogía en sus planes de estudios y la conceptualización de la formación inicial de los profesores como un primer paso para armonizar su desarrollo profesional. Ambos países dan una gran importancia a las competencias de los profesores y, también en ambos, la selección de estudiantes está sólo vinculada a sus resultados académicos en una etapa anterior. Los resultados demuestran cómo la mayor parte de las políticas nacionales en estos dos países están alineadas con las sugerencias internacionales y supranacionales.

El último capítulo presenta un resumen de los resultados en términos de conclusiones, e incluye la aplicación práctica con recomendaciones para España. Tras las conclusiones y la aplicación se añade un apartado con las posibilidades y límites de la tesis, así como una propuesta para futuras líneas de investigación.

La aplicación de los resultados se clasifica a lo largo de las categorías de comparación de la investigación. Por ejemplo, en las instituciones y las vías de formación, la tesis recomienda una mayor flexibilidad para abrir la carrera a diferentes perfiles, pero manteniendo la formación en un grado de educación terciaria; en el diseño del plan curricular, las propuestas caen en replantear las directrices nacionales, el aumento de las prácticas y del tiempo de formación, y la reorganización de las asignaturas y áreas. En la dimensión de competencias profesionales, y en aras de la coherencia entre la legislación educativa y la carrera profesional de los docentes, podrían reafirmarse dimensiones como el aprendizaje permanente, la identidad de los docentes y su responsabilidad social; en relación con la cualificación de los profesores, las recomendaciones proponen tener en cuenta otras experiencias profesionales o la reconsideración de poder especializarse en una de las dos etapas de educación secundaria; y en la última sección, la selección de los estudiantes para programas de formación inicial de docentes de secundaria, las propuestas enfatizan dinámicas más amplias que pudiesen ayudar a seleccionar candidatos apropiados y a crear un grupo de profesores con una fuerte identidad profesional.

Palabras clave: educación incial de docentes, China, España, estándares internacionales, políticas educativas.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACTS: ASEAN Credit Transfer System

ANECA: National Agency for Quality Assessment and Accreditation of Spain

APQN: Asia-Pacific Quality Network

ASEAN: Association of Southeast Asian Nations

AUN: ASEAN University Network

AUN: ASEAN University Network

CAMPUS Asia: Collective Action for Mobility Program of University Students

CAP: Pedagogical Aptitude Course

CEPAL: Center for Education Policy and Leadership

CNY: Chinese Yuan

ECNU: East China Normal University

ECTS: European Credit Transfer and Accumulation System

EEC: European Economic Community

EFA: Education For All

EHEA: European Higher Education Area

ET 2010: Education and training 2010

ET 2020: Education and training 2020

EU: European Union

EUR: Euro

GDP: Gross Domestic Product

GER: Gross Enrolment Rate

HEEC: Higher Education Evaluation Center Ministry of Education

IBE: UN International Bureau of Education

ICTs: Information and Communications Technologies

ICUE: International Consortium for Universities of Education in East Asia

IMF: International Monetary Fund

INQAAHE: International Network for Quality Assurance Agencies in Higher Education

ISCED: International Standard Classification of Education

LOE: Organic Law 2/2006, of 3 May, on Education

LOMCE: Organic Law 8/2013, of 9 December, for Improving Education Quality

MECS: Ministry of Education, Culture and Sport (Spain)

MOE: Ministry of Education of the People's Republic of China

NCCT: National Center for School Curriculum and Textbook Development

OECD: Organisation for Economic Co-operation and Development

PRC: People's Republic of China

RIHED: Regional Centre for Higher Education and Development

SEAMEO: Southeast Asian Ministers of Education Organization

UAM: Autonomous University of Madrid

UCTS: UMAP Credit Transfer Scheme

UK: United Kingdom

UMAP: University Mobility in Asia and the Pacific

UN: United Nations

UNDP: United Nations Development Programme

UNESCO: United Nations Educational, Scientific, and Cultural Organization

UNICEF: United Nations Children's Fund

USA: United States of America

WTO: World Trade Organisation

CHAPTER 1

INTRODUCTION

This first chapter introduces the topic of the thesis. It is divided into three sections, significance and rationale of the study, motivation and outline of the thesis. The firt two sections explain the relevance of the subject and the reasons that motivated the selection of this topic. These two sections show a combination of both a professional and a personal point of view. The last section of this chapter presents the genral structures and contents of all the other chapters.

1.1. SIGNIFICANCE AND RATIONALE OF THE STUDY

This research is driven by three core trends and dilemmas: (1) the massive increase of students in secondary education, mainly in junior secondary education, which is currently compulsory in both countries; (2) the challenges for both institutions and programmes to prepare new teachers for secondary education under the new social and economic exigencies, abandoning an elitist perspective of education; and, (3) the consequences of globalization and international organizations, acting as motors of changes and as evaluators of international harmonization.

Besides this, the origins of this thesis lie essentially within three core principles. The first is to consider initial teacher education as one of the main bases of the quality of an educational system. The establishment of this fundamental concept is based upon numerous

international and supranational organizations' studies which regularly link teacher education and other major concepts like status or professionalization. The key terms are included in the first chapter.

The relationship between the education system, the quality of teaching, the quality of the educative system and teacher education programmes is shared and repeated by numerous studies (García Garrido, 1986; Imbernón, 2000; Marchesi and Martín, 2000; Barberá, 2003; Cochran-Smith and Fries, 2005; Coba Arango, 2011).

This first topic is already justified by the mere fact that the Organization for Economic Cooperation and Development (OECD) produced a report titled *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*. In this report, the OECD states that "[…] raising teacher quality is perhaps the policy direction most likely to lead to substantial gains in school performance" (p. 2) and, the OECD also refers to Greenwald et al. (1996) and Hedges and Greenwald (1996), who "found that variables such as teacher education, teacher experience and teacher ability show strong relations with student achievement" (p. 26).

"The teacher characteristics that are harder to measure, but which can be vital to student learning need to be more prominent in teacher preparation and employment" (OECD, 2005a, p. 23).

This declaration is shared by the McKinsey Report (Barber and Morushed, 2007), which argues, after comparing schools on all the continents, that "students placed with high-performing teachers will progress three times as fast as those placed with low-performing teachers" (Hanushek, 2005 cited in Barber and Morushed, 2007, p. 12). According to this report, there are other parameters that attract better teachers, such as more comprehensive selection and the status in which society holds their teachers.

In this regard, the thesis aims to select and analyse the parameters and components of teachers' initial education to improve the Spanish national system.

Following this idea, the second principle is related to the Spanish higher education system and secondary teachers' education. Spanish higher education has been subject to intense structural and methodological reforms as a result of the country's membership of the European Higher Education Area (EHEA). In regard to the secondary teachers' education system, these reforms were particularly deep when the initial Course of Pedagogical Aptitude was changed to a 1-year official Master's in the academic year 2009/2010. The present work

aims to make the most of the research studying this degree recently implemented in accordance with the EHEA.

Another reason motivates the interest in teachers and secondary education. According to UNESCO (2013a), lower secondary education is compulsory in about 80% of the countries analysed in *A Teacher for every Child: Projecting Global Teacher Needs from 2015 to 2030*. However, the world is going through a strong shortage of teachers, especially secondary teachers, because "Problems in teacher supply are more often about shortages of specialized teachers, either in terms of subject matter or the ability to work with pupils with special needs" (UNESCO, 2006, p. 11). Specialized teachers are needed in secondary education, hence the shortage is especially strong in these schools. In this regard, to reach the goals of Education for All (EFA), 5.1 million new lower secondary teachers should be hired before 2030.

This situation is relevant worldwide, as many countries show "serious concerns about maintaining an adequate supply of good quality teachers" (OECD, 2005a, p. 29). Not only expansion but also quality is a matter of concern in modern societies, as part of the need to prepare the necessary amount of teachers in the appropriate amount of time. Aggravating the shortage, secondary teachers show the highest dropout rate of all teaching levels, especially for males and teachers of highly demanded subjects like mathematics, sciences and technology (OECD, 2005a).

Secondary education seems to be the neglected and missing link between primary and higher education, and so far few authors and organizations have focused their research upon it, and then mainly on senior secondary education and the transition from the lower to the upper level. However, in the OECD countries, this educative level currently reaches an 82% graduation rate, 75% for the G20 (OECD, 2012). During this stage, future life paths are selected and determined. Not only does it correspond to the turning point between compulsory and higher education, but it also defines the necessary knowledge to guarantee a solid foundation on which to establish future learning.

One of the main concerns when designing a new educative system is the balance between curricular and pedagogical knowledge, competencies and attitudes. According to Scocco (2006), most educationists pay excessive attention to the knowledge component while neglecting the development of the other two (competencies and attitudes). Most of the actual systems are framed in what Cochran-Smith and Lytle (1999) call, "knowledge-for-practice," where student teachers learn theory based on research from experts and highly qualified

educators. On the other hand, it is understandable that a pure "knowledge-in-practice" approach, where teachers learn from their own experiences and reflections, is not possible, since students in this stage have no expertise or theoretical basis. However, analysing the current situation and trying to find a better balance between these two poles would probably lead to an overall improvement of the academic system.

This assertion is shared by the European Commission which, in their communication *Improving Competences for the 21st Century: An Agenda for European Cooperation in Schools* (European Commission, 2008), establishes the need for initial teacher education to improve the balance between theory and practice and to present teaching as a problem-solving or research-in-action activity linked more to pupils' and students' learning and progress.

Many questions arise from this imbalance and from the implementation of new designs and structures. What is the best way to distribute teacher education curricula? What is the path proposed by international organizations? Which systems give better results? Is the length of the programmes a guarantee of quality? How do we make secondary teachers feel confident when entering a classroom? How do we avoid the traditional gap between practice and theory?

The third main principle links the first (teacher education as a basis for quality education) and the second (Spanish reforms according to the EHEA, the shortage of teachers and the need to improve teacher education curricula) principles, and simultaneously, the other core subject of the research, China.

Globalization in the field of education has led to profound changes in the educational systems of all countries, especially those of an emerging nature, which have had to adapt their traditional educational structures to modern demands made by contemporary societies. Among these emerging countries, one stands out significantly: China.[1] China is currently the country with the highest growth of the planet, the most populous and one of the largest. This economic, demographic and geographical potential make it an object of study of great interest and therefore a country to learn from, and with.

[1] China's official name is People's Republic of China, however in this project, the term China will make reference to what is known as mainland China, without including Hong Kong, Macau or Taiwan.

Many correlations have been made between education and economic development, "Educational quality—measured by what people know—has powerful effects on individual earnings, on the distribution of income, and on economic growth" (Hanushek and Wößmann, 2007, p. 2). Hence, it is also important to conceive that economic growth may have had an impact on Chinese academic results in international assessments.

The approaching philosophies and the increment of trade and educative agreements between China and Europe, added to new intercultural and highly educated societies, is leading to the necessity of working together to what international and national bodies are establishing as quality objectives. Following this premise, a last component justifies this study: the relevance of international organizations in promoting worldwide quality in specific topics of education through supranational proposals and their impact on national policies.

This study aims to help Spain to better understand China and to reach a higher quality in education. The curiosity about this matter comes from the personal and academic background of the researcher, who moved to China to carry out this study after working in the Spanish school system. This combination also offers a closer and intercultural view of both countries.

1.2. MOTIVATION

This research was born thanks to, and because of, several factors, both professional and personal. It is the result of the opportunity to analyse recent national reforms, the will for real professional career development and a personal interest in education, other cultures and languages. It complements a life's perspective of work and concern in education, travelling and experiences living abroad.

Recent Spanish reforms enhanced the relevance of the topic, and the Chinese Government's scholarship gave the researcher the amazing opportunity to develop the project in the country, experiencing the Chinese system first-hand.

The researcher's professional career took place in a school where inclusion and multicultural perspectives fluently interact, and where different levels, early childhood education, primary and special education, interchange in activities and classrooms. The only level which seemed far away from this active life was secondary education and its teachers. Hence the curiosity began and the researcher started to wonder about the next level and the people with the same profession but different education, schedules, salaries and difficulties.

Simultaneously, the researcher has professionally reached the official top of teachers' development (there are not different levels for teachers in Spain), and kept asking herself how to keep academically growing in a place where growing was not officially contemplated and how to avoid a 'flat career'. After working in vocational programmes, primary and special education, a better understanding of secondary education seemed to be the next step.

Beside secondary education being an 'untreated' level, a deep professional interest revolved around Asian culture and Asian educative results. Certainly China was the most important emerging country of the world, Chinese students have the best academic results and diversity was assured in the project. The topic guaranteed a certain degree of difficulty as well as being incredibly interesting. Undoubtedly the Asian view of the world, so radically different from the Europeans, and the way of educating their students, could offer useful hints for other countries and the researcher.

1.3. OUTLINE OF THE THESIS

This thesis consists of eight chapters which aim to display, under a coherent approach, four main elements: the underlying process of the research, the methodology, countries' current situation and final results. Three other components had an impact on the organization of the research: symmetry, summaries and consistency.

First, in order to tackle a wider-angled and consistent line within the framework of the research, symmetry among and within chapters is the basis for organizing the national and international data included in all chapters. The sequence of these data is as follows: data for China, data for Spain and international/supranational information. Every chapter is in turn divided into sections, which reflect the same contents for each country, and information on supranational guidelines corresponding to the topic of the chapter. The outline of this organization is summarized in the table of contents, in which the symmetry of the thesis can be confirmed.

Second, all chapters include a summary. The summaries aim to extract the core ideas of each part of the thesis and ease the reading of the next chapter. They also stress the accumulated knowledge necessary to obtain a wider understanding through all the components and appreciate the complexity of the topic.

Third, directly linked to the other two essential components, consistency refers to the guiding spirit of the thesis when choosing the distribution of the chapters and the contents

of the summaries. This concept endorses a cascade from general to specific; hence, the research displays the information emphasizing practical and continuous knowledge under the following organization:

The first chapter sets the background and rationale of the study, as well as the professional and personal motivations of the researcher to pursue this research. The second chapter introduces the methodological approach, including the research objectives and purposes, arranges the phases according to the comparative method and establishes parameters and indicators.

Chapter Three defines the theoretical framework for the research. It sets the conceptual basis, harmonizing the key notions managed during this research (initial teacher education and secondary education, under a historical and modern perspective), to finally reach a term consensus for developing the research. The second and third sections of this chapter describe the current state of the main elements of initial teacher education, itemizing and putting into perspective the current dilemmas of the profession. A supranational outlook on the matter regarding quality closes the chapter.

Chapter Four symmetrically describes the Chinese and Spanish overall territorial, social, political, economic and educative background. It places each country within the world and within their respective continents, also taking into account international agreements and relationships, to further detail education on all three levels: general education policies, qualification recognition and mobility, and future guidelines for teacher education. After the international view of each country, the product of the actual globalization perspective, a national and detailed description of their general educative systems is presented. National descriptions focus on secondary education and include education policies, legislation, organization and quality standards. The last section tackles the academic relationship between China and Spain, as well as the cultural differences and their repercussions in education.

Chapter Five presents the phases of description and interpretation of the main topic (secondary teachers' initial education) disaggregating each country into eight components to offer a historical and current state of the matter, and to tackle each of the elements selected in the methodology to answer the research questions. As in every chapter, the last section shows the supranational guidelines for initial teacher education, presenting a wider range of

possibilities out of the two national contexts as well as an international perspective on quality and good practices.

Chapters Six and Seven confront the data extracted from the previous chapters. National information from China and Spain is contrasted in Chapter Six, looking for convergences and divergences between the two countries. Chapter Seven gives a juxtaposition and comparison of secondary teachers' initial education in both countries. This chapter also includes a section comparing national policies and programmes in regard to supranational proposals. These chapters detect, display and discuss the results of this comparison, including a contextualized explanation.

The last chapter concludes with the main findings and practical proposals which could help to improve the current secondary teachers' initial education system in Spain. The main goal of this section is to reflect and complement national experiences in education, especially for secondary teachers, under a supranational perspective. The proposals are however influenced by the limitations exposed in this chapter. To overcome the limitations and benefit from the strengths of this study, the last section addresses recommendations for further research agendas.

CHAPTER 2

METHODOLOGICAL FRAMEWORK

The chapter presents the theoretical foundations and practical processes of the methodology used in this research, outlined as a comparative study under the procedures and phases proposed by many authors, from Bereday (1968) and García Garrido (1986), complemented by the guidelines provided by Phillips (2006), Phillips and Schweisfurth (2014) and recent proposals, such as Caballero, Manso, Matarranz, and Valle (2016). It develops the hypothesis, the objectives and the research questions guiding the investigation, and explains the method of integrating the national context analysis and supranational recommendations.

2.1. METHODOLOGICAL APPROACH

As a relatively recent field, comparative education has undergone rapid development since its first phase, at the beginning of the 19th century, when comparison was closer to a "mere copy" (Bereday, 1968, p. 34) from other countries than to the complexity in approaches and methodologies that it has acquired over the years. The evolvement through "knowing the other" (1880s), "understanding the other" (1920s), "constructing the other" (1960s) to finally "measuring the other" (2000s) has given comparative education legitimacy and popularity (Novoa and Yariv-Mashal, 2003).

Through these transitions, comparative education has progressively encompassed different methodologies and perspectives to reach a holistic view of this multifaceted field.

Education, in this research referring to secondary teachers' initial education, integrates humanistic, cultural, social, political and economic features, requiring the complementation of both qualitative and quantitative information.

Currently, to meet this general need in comparative education studies, "Comparativists use all the research methods that other investigators of aspects of education employ in their research. They can therefore call upon a huge body of established approaches specific to the particular task of comparison" (Phillips and Schweisfurth, 2014, p. 101).

In this case, the methodology is predominantly comparative, though it includes a mixed-method approach to comparative education, combining qualitative and quantitative data, based on a two-country case study strategy. Like most comparative studies (Lor, 2011; Rust and Liao, 2011; Foster et al. in Abdullah, 2013), and due to the essence of the issue being multifarious, socially constructed and referring to a holistic reality, this research is qualitative in nature. Owing to the magnitude of qualitative information and contextual variables, qualitative data analysis has been done, principally, hermeneutically. When possible, as in the qualitative data exposed in the section on professional competencies which refers to two specific documents, the analysis has been carried out using QDA Miner Liter.

As recommended in comparative methodology, mainly when tackling two national contexts, sources included in this research were primary and secondary, extracted from national, international and supranational documents, databases and reports. Quantitative data was gathered mainly from primary sources such as the OECD, UNESCO, UNICEF, the World Bank or Eurydice, as international entities, and from the National Bureau of Statistics of China and the Spanish National Institute of Statistics, as national entities. Other contributions were collected from official websites (The State Council of the People's Republic of China, Shanghai Municipal Education Commission, United Nations, European Union, etc.).

The comparability of the study, which is justified in depth in Section 2.4.2 (delimitation of the comparative area), is assured by the homogenous character of the units, being two countries. In this sense, the starting point for understanding each context is national documents having an impact in the whole territory. Moreover, this thesis aims to include an international perspective, comparing national systems with international standards. International education standards, captured in supranational policies of education (Section 3.4 of the theoretical framework and Figure 3.2 tackle the notions used in this research for these two concepts), favour the comparative character of the thesis, since they come from

policies boosted by international organizations as result and consequence of globalization. The relationship between globalization, national and international standards, is further explained during the thesis, where each chapter includes a section tackling this topic, in addition to Figure 2.3 (Section 2.6).

Most of the qualitative data has been selected from primary sources: international reports (Education for All, Teachers and Educational Quality: Monitoring Global Needs for 2015, UNESCO Strategy on Teachers (2012-2015), McKinsey Reports, etc.) and national communications (national legislation, national reports and agendas from the Ministry of Education of the People's Republic of China and the Spanish Ministry of Education, Culture and Sport). Other qualitative data was consulted in reliable secondary sources, such as academic journals (*Comparative Education Review*, *Beijing Review*, *Review of Research in Education*) and books (*Handbook of Teacher Education*, *Comparative Education: The Dialectic of the Global and the Local*, etc.).

This investigation has been designed including the first four traditional phases of comparative education research: description, interpretation, juxtaposition and comparison (Bereday, 1968), and a fifth stage including a generalization of the results or a prospective phase (Lê Thành Khôi, 1981).

Most modern approaches organize comparative education researches around these five steps or similar stages as in García Garrido (1986): identification of the problem and hypotheses (pre-description and pre-hypotheses), delimitation of the research (the object and the methodology), descriptive study (analytical phase including explanation and interpretation), re-formulation of the comparative hypotheses (data juxtaposition and confrontation) and comparative study (synthetic phase, including comparative conclusions and prospective).

David Phillips (2006), however, identified six stages (the main alteration is found in Garrido's last stage, which is here separated into two different phases), with similar contents: conceptualization (questions), contextualization (description), isolation of differences (analysis/juxtaposition), explanation (development of hypotheses), reconceptualization (contextualization of findings/comparison) and application (generalization). Other modern classifications break up the methodology into eight steps, though the main pattern remains: selection and definition of the problem, hypothesis, selection of the analysis unit, description, interpretation, juxtaposition, comparison and prospective (Caballero et al., 2016).

The structure of the research, according to the proposal of these phases and categorizations, is represented in Figure 2.1.

Figure 2.1: Synthesis of the research structure and organization

General Objective	Specific objectives	Chapters	Phases	Methodological Character
		Chapter 1 Introduction		
		Chapter 2 Methodology	Identification of the problem and hypotheses	Qualitative
		Chapter 3 Theoretical framework	Delimitation of the research	Qualitative
General Objective 1	Specific objectives 1.1 to 1.3	Chapter 4 National frameworks	Description (analytical phase)	Qualitative and quantitative
General Objective 1	Specific objectives 1.4 and 1.5	Chapter 5 Description and interpretation	Description (analytical phase)	Qualitative and quantitative
General objective 2	Specific objectives 2.1 and 2.2	Chapter 6, 7 Juxtaposition and comparison	Comparison (synthetic phase)	Qualitative and quantitative
General objective 3	Specific objectives 3.1 and 3.2	Chapter 8 Conclusions and prospective	Application	Qualitative

2.2. IDENTIFICATION OF THE RESEARCH PROBLEM

"The detection and desire to comparatively study a problem already means the existence, often unconscious, of a pre-hypothesis"[2] (García Garrido, 1986, p. 141-142). Finding a problem is only the beginning of a process to find equivalences and further identify variables (differences) in educative systems. As noted by Phillips (2006) "(…) the variables would cause us to question the viability of any imagined constants on the educational phenomena in question" (p. 315), particularly, notes the author, when both systems seem to belong to completely different contexts.

The problem of this research, the basis and driver of the plan, focuses on the first stage of teacher education, labelled 'initial' or 'pre-service', for teachers who aim to work in junior (or lower) and senior (or upper) secondary education.

The motivation to investigate this problem is endorsed by national recent reforms (in China, Spain and numerous countries around the world) and global trends in secondary students' characteristics, access, outcomes and challenges, as well as the fact that teachers are known to be a key element in every educative level. The consequences of secondary education becoming a regular and accessible stage for most of the population have accentuated governments' and populations' concerns about this level and its characteristics.

Other factors promote and ease this investigation, such as the existence of qualitative and quantitative international assessment addressing secondary education students and general data on international education; globalization and technologies as a direct, dynamic and unavoidable channel of connection; and supranational programmes proposing agendas with a certain impact in national contexts, of which several spread secondary education (junior) as being compulsory worldwide.

In this research, secondary education refers to the equivalent of International Standard Classification of Education (ISCED) 2 and ISCED 3, regarding only general education and not including technical or vocational education. In turn, teacher education refers to education in higher education institutions at ISCED 5, 6 and 7 (although ISCED 8 is also tertiary education, none of the countries place teacher education only at that level).

Relating to these components, the initial ideas formulated for this thesis were: How are globalization and new secondary teacher education trends being materialized and put into practice in national realities? What are and how are the main steps and components in initial

[2] Personal translation from the Spanish version.

teacher education designed? Are the latest national efforts and reforms related to teacher education having the desirable impact on education? From a practical point of view, is the Chinese proposal essentially different from other systems? Is it possible, desirable or appropriate to adapt Chinese plans, which have showed great academic results, for other national contexts? Regarding teacher education, what is the role and impact of international and supranational proposals?

These general questions are currently being debated at the national and international levels. For the purpose of this study, they are organized in the next section as research questions linked to the objectives and hypotheses of the research. Currently, in Spain, there are several political disagreements and controversies surrounding this topic, which has led to a situation where crisis and opportunities coexist. This research could offer some ideas to reflect on future policies and plans, looking for a balance between supranational and national identities and needs.

2.3. RESEARCH OBJECTIVES, HYPOTHESES AND QUESTIONS

The purpose of this study is to comparatively examine secondary teachers' initial education under an international and supranational perspective, and to understand how some universities in Europe and Asia, in this case represented by China and Spain, have designed their tertiary programmes following international trends. In light of the findings, the final purpose of the thesis is to propose possible changes, modifications or suggestions to improve the Spanish education system regarding secondary teachers' initial education. This purpose is tackled in the Conclusion chapter, in the section on application (Section 8.2).

To uncover these divergences and convergences the research is guided by three general objectives, focusing on national and international policies.

- General Objective 1: To understand and describe, under a contextualized framework, the main elements of secondary teachers' initial education systems in two countries: China and Spain. To detect and describe international standards of quality regarding teacher education.

- General Objective 2: To detect convergences and divergences between Chinese and Spanish secondary teachers' initial education system, as well as possible international trends and guidelines in secondary teachers' initial education.

- General Objective 3: To propose possible reforms in the Spanish model of secondary teachers' initial education in the context of the international trends detected.

As a ladder to reach the General Objectives, which encompass components from diverse fields, these are in turn itemized into ten specific objectives, as follows:

1.1. To describe and analyse the general context of each country, understanding each country within their own continent and under an international perspective. To detect international, continental and national trends with an impact on teacher education. (Context)

1.2. To detail and comprehend both general systems of education. (General education)

1.3. To quantitatively and qualitatively describe and understand the main elements of secondary education in each country. (Secondary education)

1.4. To define and interpret the key components of secondary teachers' initial education systems statewide in China and Spain. (Teacher education)

1.5. To identify international and supranational quality standards proposed by different international organizations regarding teachers' initial education. (Quality and international and supranational policies)

2.1. To detect common trends, convergences and divergences between both systems of secondary teachers' initial education. (Juxtaposition and comparison of national contexts)

2.2. To assess the relationship between secondary teachers' initial education systems in both countries and international standards of quality within teacher education in higher education institutions. (Juxtaposition and comparison of international/supranational policies and national contexts)

3.1. To summarize the most important findings of the comparative study in both countries and under international and supranational quality standards. (Conclusions)

3.2. To identify possible areas for improving the lacks and strengths of the secondary teachers' initial education system in Spain. (Conclusions)

The core idea is to check how recent changes in secondary teachers' initial education systems, both in Europe and Asia, have common trends, hence university structures and models where this education is carried out have convergences. In this regard, the hypotheses this research intends to confirm or deny are:

Comparative Hypothesis 1: The Chinese and Spanish secondary teachers' initial education systems take place in higher education institutions and have exclusive national characteristics as a consequence of several factors, including both educative and non-educative features.

Comparative Hypothesis 2: Despite the divergences in some components, there are convergences between both countries' modern systems of secondary teachers' initial education and international trends, showing Euro-Asian convergences.

Comparative Hypothesis 3: International trends and Chinese secondary education and its secondary teachers' initial education plan may shed light on the Spanish educative system, showing areas for improvement and reflection.

The objectives are to be meet and the hypotheses confirmed or denied by answering specific and direct questions. The research questions of the investigation are:

1. What is the national context (territorial, social and economic features) in which teacher education takes place from a national, continental and international perspective?

2. What are the latest trends in education, impacting on teacher education, in each of these continents and in the two selected countries? How are these continents and countries participating in broader initiatives which have an influence on teacher education?

3. What are the continental agendas (Asian and European) to further improve teacher education?

4. What is, in terms of legislation, investment, future guidelines and structure, the general system of education in each country?

5. How is secondary education conceived in each country, in terms of structure, curriculum, schedules, human resources, institutions, teachers' working conditions and teachers', families' and students' roles?

6. What are the current dilemmas and challenges that each country has to confront in secondary teachers' initial education?

7. What models of secondary teachers' initial education systems are carried out in China and in Spain at the national level? How are these models defined in terms of characteristics conceived as core components of secondary teachers' initial education systems (institutions, pathways, curriculum, qualifications and selection)?

8. What are the teaching skills (profile of competencies) required in each country for future secondary school teachers?

9. What are the suggestions released by international organizations addressing teachers' initial education quality standards?

10. In which aspects do the Chinese and Spanish models converge or diverge?

11. Do the systems of secondary teachers' initial education in these countries concur with international quality standards?

12. According to the findings, what does the Spanish secondary teachers' initial education system lack?

Table 2.1 shows the general objectives selected to meet each hypothesis and the research questions for each general and specific objective. The research is conceived in a cascade mode, where all three General Objectives are strongly related and must be reached through a consecutive procedure. The first objective is essential to further develop the second, which is in turn an indispensable prelude to the third. All are consistent with a comparative study methodology, which is tackled in the next section.

Table 2.1: Organization of hypotheses, research objectives and questions

Comparative hypotheses	General objectives	Specific objectives	Research questions
Hypothesis 1	1	1.1	1,2,3
		1.2	4
		1.3	5
		1.4	6,7,8
		1.5	9
Hypothesis 2	2	2.2	10
		2.3	11
Hypothesis 3	3	3.1/3.2	12

2.4. UNITS OF ANALYSIS

2.4.1. DELIMITATION OF THE PROBLEM

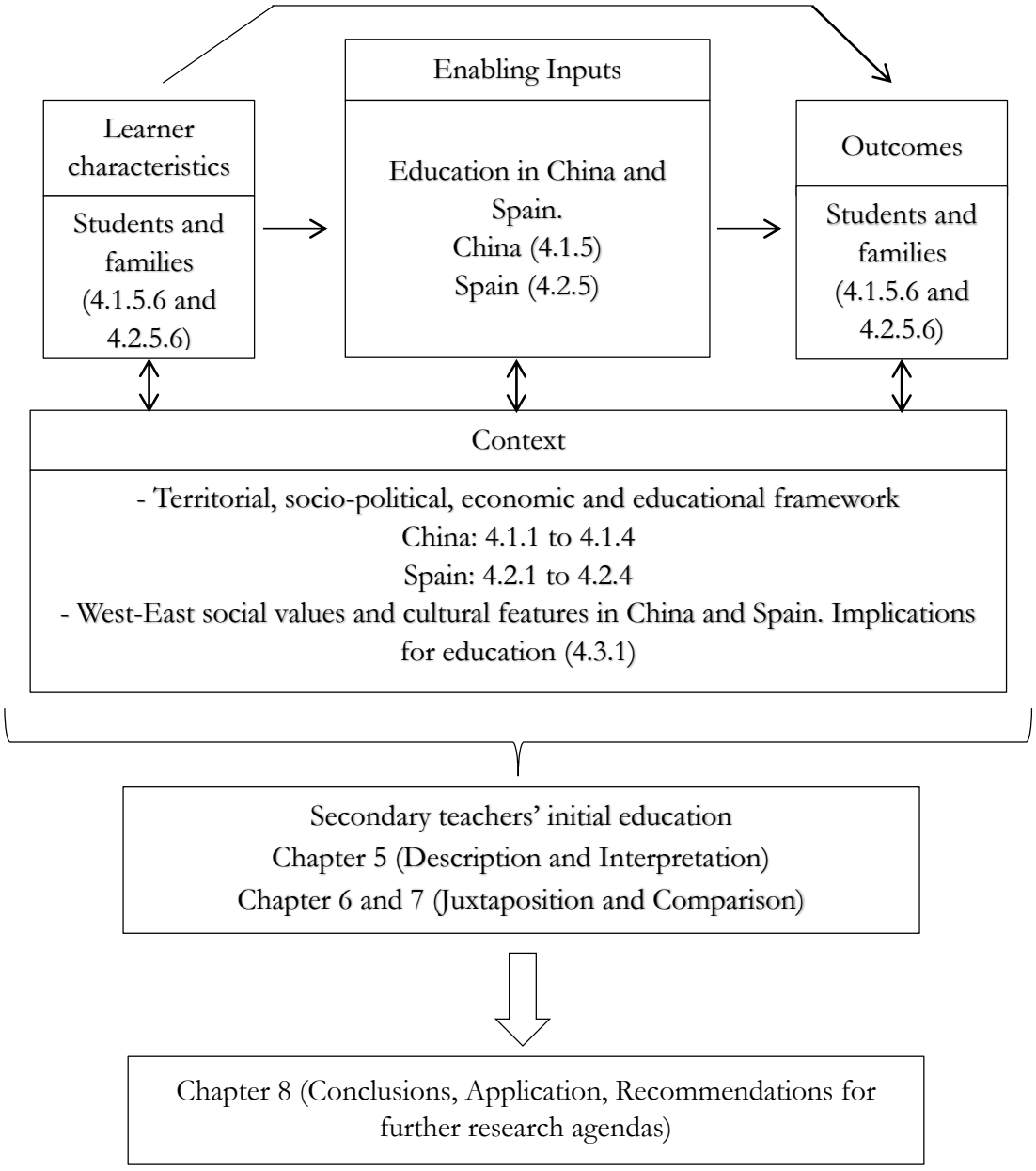
The essence of this research is based on terms of quality, both national and international, to meet a double objective, to design and organize quality research and to cope with international and supranational standards. The original framework of quality guiding this research was designed by UNESCO (2004a) and is shown in Section 3.4, "Teacher education and quality under an international and supranational perspective".

In this matter, quality as a fundamental issue and purpose underlying this study, its relevance for choosing the comparison categories and the relationship between the international concepts of quality and the structure of this thesis is shown in Figure 2.2 (the UNESCO quality framework is in Figure 2.4). The equivalence among the chosen components for this investigation, its organization and the elements of quality selected by UNESCO aims to offer a clearer view of the fundamental motivations and driving forces of this research, as well as to perceive and place the subject in its complexity and comprehensive context.

Several authors and international and supranational documents claim the relevance of teachers, hence this study places teacher education (in this case only referring to secondary

and initial education) as the basis of the chart representing the quality framework. The findings and application of the study, which may in turn contribute to quality improvement, are placed in the last step of both the chart and the thesis.

Figure 2.2: Research organization according to international standards of quality



Source: Researcher's original work based on UNESCO (2004a)

The organization and selection of the collected data was decided to address the research objectives and questions, and, as established in the comparative methodology, organized into comparison categories (or dimensions), parameters and indicators. The indicators meet the criteria of appropriateness to the context, significance for the study, reliability and validity. As aforementioned, the General Objectives are organized to be reached consecutively, hence the first General Objective delimits the selection of the dimensions which are latter

contrasted and compared. The comparison categories are organized according to the first General Objective and the comparison category of international guidelines included in General Objective 2 (both elements guiding the development of General Objectives 2 and 3), are as follows:

Comparative indicators for Specific Objective 1.1: To describe and analyse the general context of each country, understanding each country within their own continent and under an international perspective. To detect international, continental and national trends with an impact on teacher education. (Context)

Table 2.2: Comparative indicators for Specific Objective 1.1

Comparison category (CC)	Parameters (P)	Indicators (I)
CC. 1 Territorial, socio-political and economic features	P. 1 Territorial and socio-political features	I. 1- Area
		I. 2- Political system
		I. 3- Capital
		I. 4- Territorial extension
		I. 5- Territorial distribution
		I. 6- Border countries
		I. 7- Population
		I. 8- % population in rural areas
		I. 9- Languages
		I. 10- Religions/philosophies
		I. 11- Life expectancy
		I. 12- Human Development Index (2014)
	P. 2 Economic features	I. 13- Currency
		I. 14- GDP (PPP) progression from 2002 to 2012
		I. 15- GDP per capita (PPP) (year)
		I. 16- Average net salary (month)
		I. 17- Minimum salary (month)
		I. 18- Labour force
		I. 19- Unemployment rate

		I. 20- Poverty line (year)
		I. 21- % population below poverty line

Comparative indicators for Specific Objective 1.2: To detail and comprehend both general systems of education. (General education)

Table 2.3: Comparative indicators for Specific Objective 1.2

Comparison category	Parameters	Indicators
CC. 2 System overview	P. 3 Education system structure and organization	I. 22- General educative system organization
		I. 23- Compulsory education length (years)
		I. 24- Secondary school structure
		I. 25- Secondary level character
		I. 26- Number of significant exams until university stage
	P. 4 Education enrolment data	I. 27- Primary education enrolment rate (net)
		I. 28- Junior secondary education enrolment rate (net)
		I. 29- Senior secondary education enrolment rate (gross)
		I. 30- Mean years of schooling
		I. 31- Expected years of schooling
		I. 32- Student-teacher ratio at each level
	P. 5 Economy and education	I. 33- 12-year progression of GDP investment in education (2002 – 2014)
		I. 34- Education budget-GDP (2014)
		I. 35- Type of school (public, private, co-funded)
		I. 36- Source of funding (banks, religions organizations, etc.)
	P. 6	I. 37- Current general law of education

	Education management, legislation and responsible bodies	I. 38- Grade of general education decentralization
		I. 39- Management and administration bodies of general education
		I. 40- Management bodies of higher education
		I. 41- Responsible body for curriculum design
		I. 42- Responsible body for materials and books

Comparative indicators for Specific Objective 1.3: To quantitatively and qualitatively describe and understand the main elements of secondary education in each country. (Secondary education)

Table 2.4: Comparative indicators for Specific Objective 1.3

Comparison category	Parameters	Indicators
CC. 3 Secondary education curriculum design and schedules	P. 7 Curriculum organization	I. 43- Political values underlying education
		I. 44- Paths
		I. 45- Curriculum organization
		I. 46- Number of subjects per year
		I. 47- Subjects character and distribution (compulsory or elective)
	P. 8 Schedule organization	I. 48- Number of weeks per year
		I. 49- Time per class
		I. 50- Classes and homework weekly average (hours)
CC. 4 Secondary education: institutions and teachers	P. 9 Policies and qualification	I. 51- Teachers' type and level of qualification for each stage
		I. 52- Responsible body for teacher education policies
	P. 10 Teachers' salaries	I. 53- Secondary teachers' salary
		I. 54- Salary complements

		I. 55- Responsible body for teachers' complements
		I. 56- Teachers' extra pay according to students' performance
	P. 11 Working hours	I. 57- Working hours (week)
		I. 58- Teaching hours (week)
	P. 12 Institutions and teachers of secondary education	I. 59- Number of secondary teachers
		I. 60- Number of secondary schools
		I. 61- % of each type of school (public/private) in secondary education
		I. 62- % of teachers working in private/public secondary schools
	P. 13 Teachers' status	I. 63- Legislation tackles respect for teachers and aims to "raise teachers' social status"
		I. 64- Social perception
		I. 65- Associated status
		I. 66- Families' opinion towards the teaching profession for their children
		I. 67- Families' opinion of students' respect towards teachers
		I. 68- Trust in teachers
CC. 5 Secondary education: students and families	P. 14 Students and institutions	I. 69- Number of secondary students
		I. 70- % of students in each type of institution (public/private)
	P. 15 Academic results	I. 71- Outcomes in international assessment (PISA 2012)
	P. 16 Students' and families' perception of education	I. 72- Reasons for students' failures
		I. 73- Participation in class
		I. 74- Students' opinion about teachers' most important qualities
		I. 75- Students' opinion about teachers' less important qualities
		I. 76- Families' influence on students' choices

		I. 77- Competitiveness

Comparative indicators for Specific Objective 1.4: To define and interpret the key components of secondary teachers' initial education systems statewide in China and Spain. (Teacher education)

Table 2.5: Comparative indicators for Specific Objective 1.4

Comparison category	Parameters	Indicators
CC. 6 Teacher education: institutions and paths	P. 17 Institutions and paths	I. 78- Kind of institution
		I. 79- Length
		I. 80- Paths
		I. 81- Alternative paths
		I. 82- Flexibility of the system
CC. 7 Curriculum design and organization	P. 18 National curriculum organization	I. 83- General/National curriculum proposal
		I. 84- Total credits or hours
		I. 85- Modules
	P. 19 Extra curriculum not related to the specific degree	I. 86- Compulsory credits of basic/general knowledge (not related to pedagogy or the subject)
		I. 87- Military training
		I. 88- English language
		I. 89- National culture and heritage
		I. 90- ICT skills
		I. 91- Politics/government thinking
	P. 20 Credit distribution	I. 92- Distribution of credits general system (general/subjects/pedagogy)
		I. 93- Distribution of the credits normal universities (general/subjects/pedagogy/practicum)
		I. 94- Distribution of credits in ECNU-UAM (mathematics)
	P. 21	I. 95- Practicum is compulsory

	Practicum	I. 96- Amount of credits
		I. 97- Types of practicum
		I. 98- Schedule for practicum
		I. 99- Reference to teachers' competencies in national/supranational legislation
	P. 22 Teacher education competencies and legislation	I. 100- Main categories of teachers' competencies
		I. 101- Teachers' initial education is designed based on competencies
		I. 102- Main categories of teachers' initial education competencies
	P. 23 Policies, politics and career understanding	I. 103- Official policies
		I. 104- Political guidelines
		I. 105- Professional development and lifelong learning
CC. 8 Teachers' professional competencies	P. 24 Teachers' knowledge	I. 106- Subject / Curriculum knowledge
		I. 107- Pedagogy / Methodology
		I. 108- Educational foundations
		I. 109- Group management
		I. 110- Evaluation methods
		I. 111- Education context, design and organization
		I. 112- General knowledge and current situation
	P. 25 Teachers' attitude and diversity	I. 113- Teachers' personal attitudes
		I. 114- Teachers' attitudes towards students
		I. 115- Students' diversity
	P. 26 Basic skills	I. 116- Technologies
		I. 117- Research skills
	P. 27 Social role	I. 118- Collaboration with the community and colleagues
CC. 9	P. 28	I. 119- Level of qualification to teach in junior/senior secondary education

Teachers' qualifications	Level of qualification and general characteristics	I. 120- Responsible body for issuing the qualification
		I. 121- Territorial validity
	P. 29 Relevant assessments for obtaining a teaching qualification	I. 122- Final university exam to obtain a qualification
		I. 123- National/regional exam to obtain the final teaching qualification after the specific programme of teacher education
		I. 124- Assessment to directly grant a teaching qualification
CC. 10 Selection of teachers-to-be for initial education programmes	P. 30 Previous examination	I. 125- General/national examination to determine secondary teachers' initial education entrance
		I. 126- Subjects assessed in the exam
	P. 31 Academic and personal standards	I. 127- Characteristics which prevent entrance to university
		I. 128- Average score to enter teaching degree
	P. 32 Academic selection	I. 129- Component with highest weight in the final selection
		I. 130- Exam grade/other degree marks the only component to enter a teaching degree
		I. 131- Possibility and freedom for universities to include another assessment for teaching degree candidates and kind of assessment
		I. 132- Complementary components taken into account in the selection process.
	P. 33 Economic and social advantages	I. 133- Economic advantages of entering a teaching degree
		I. 134- Comprehensive advantages of entering a teaching degree

Specific Objective 2.1 is reached through the juxtaposition and comparison of all of the above indicators.

Comparative indicators for Specific Objective 2.2: To identify international and supranational quality standards proposed by different international organizations regarding teachers' initial education. (Quality and international and supranational policies)

Table 2.6: Comparative indicators for Specific Objective 2.2

Comparison category	Parameters	Indicators
CC. 11 Secondary teachers' initial education system under an international perspective of quality	P. 34 Institutions and paths	I. 135- Source of programmes' funds (sustainable channels)
		I. 136- Flexibility of the structures
		I. 137- Part-time study or distance learning
		I. 138- Consecutive or post-graduate programmes
		I. 139- Common components for different types of school and levels
		I. 140- Partnerships between teacher education institutions and schools
		I. 141- Possibility to move to other courses
	P. 35 Curriculum design	I. 142- Distribution between theory and practice
		I. 143- Specific subjects or guidelines focusing on challenging classroom conditions (multi-lingual or limited resources)
		I. 144- Emphasis on teachers' capacity to diagnose students' problems and design solutions
		I. 145- Specific subjects or guidelines focusing on equality (inclusive education, gender stereotypes, non-discrimination, human rights and intercultural education)
		I. 146- Prepare teachers to manage ICT and social networks
		I. 147- Strong content knowledge with skills for reflective practice and research

		I. 148- Pedagogy courses have a strong emphasis on using research based on state-of-the-art practice
		I. 149- Focus on effective teaching methods for learning
	P. 36 Practicum	I. 150- Programmes include practical classroom experience
		I. 151- Teachers get into classrooms early in their studies and spend enough time there
		I. 152- Student teachers get support in the process
		I. 153- More than a year teaching in a designated school, associated with the university, before earning a license
		I. 154- Mentor teachers receive appropriate training and support
	P. 37 Professional competencies	I. 155- Clear and concise profiles
		I. 156- Programmes develop skills for reflective practice and on-the-job research
		I. 157- Programmes provide research skills
		I. 158- Teacher profile encompasses subject matter knowledge, pedagogical skills, the capacity to work with a wide range of students and colleagues, contribution to the school and the wider profession and capacity to continue developing
	P. 38 Qualifications	I. 159- There is a national qualifications framework for teachers at each level
		I. 160- Programme accreditation by an independent agency
		I. 161- Qualification includes subject matter knowledge, pedagogical skills, communication skills, experience and personal qualities

		I. 162- Appropriately qualified entrants are allowed to start working and earning a salary before acquiring teacher education qualifications
		I. 163- Mandatory probationary period of one to two years of teaching before full teaching qualification is awarded
		I. 164- Giving credit for significant qualifications and experience
	P. 39 Selection of teachers-to-be	I. 165- Small number of university-based teacher-education colleges with high entrance standards and relatively high status in the university
		I. 166- Enter teacher education programmes knowing enough about the subject (consecutive models)
		I. 167- Procedures to assess whether individuals wanting to become teachers have the necessary motivation, skills, knowledge, and personal qualities
		I. 168- Increase status of teachers and offer an attractive career path to attract better candidates

Specific Objectives 2.3 to 3.2 are reached through the juxtaposition and comparison of all the national and international indicators established in these tables.

2.4.2. DELIMITATION OF THE COMPARATIVE AREA

"A nation can boast of his strength to hide the political weakness, may erect a splendid facade to hide ugliness from what is behind it, can proclaim their desire to peace while is secretly becoming armed to conquer other lands, but the mode of educating children unequivocally shows us the reality of the situation"[3] (Bereday, 1968, p. 32).

[3] Personal translation from the Spanish version.

Choosing these two comparative areas, Spain and China, as representative realities of both continents and as interesting nations by themselves responds to a need for 'knowing the real situation', which was completed by the opportunity of first-hand and in-place research in both countries. On one hand, the researcher's previous personal and teaching experiences took place in Spain. In addition, Spain is one of the largest and most populous countries of the European Union (EU); it underwent a fast economic recovery during its first years as an EU member and was one of the first countries to adapt its tertiary education structures to the European Area of Higher Education.

On the other, the researcher's personal experience in China also enriches this study. The researcher moved to China for five years to get closer to, personally experience, observe and understand both cultures and educative systems. Furthermore, China is a worldwide interesting case due to its large population and territory and its latest economic recovery. In the educative field, four territories of China (Shanghai, Hong Kong, Taiwan and Macau) obtain some of the best scores in international assessments, while spreading quality and looking for equality.

The chosen countries, products of academic and professional opportunity and international relevance combined with personal interest, presented certain characteristics worth mentioning and explaining, since "International studies usually opt for one of these two ways: start from data regarding the entire country or from a model sample of the country"[4] (García Garrido, 1986, p. 132). However, in this case, both perspectives are integrated.

Given the size and diversity of China, and Chinese education, this research aims to combine both national and regional data, choosing what it is considered to be, in international spheres and in China, 'an excellent model'. The main framework and information adhere to national and official aspects of the educational system, while further examples and details tackle Shanghai's education systems (as the most accessible and high-quality system, currently being studied and reproduced by other regions), and normal universities under the direct leadership of the central government, mainly East China Normal University (as one of the most representative and high-quality institutions of the country and one of the institutions of the study).

[4] Personal translation from the Spanish version.

In Spain, national legislation is also combined with regional and specific guidelines, in this case focusing on Madrid as the capital of the country, and on several universities with secondary teachers' initial education. When specific programmes are required as example of national policies, the Autonomous University of Madrid has been chosen as one of the central universities of the capital, and the other university in which the researcher and the study are registered. In addition, it is relevant for this case to highlight and analyse its educative situation under a supranational perspective, as a member of the European Area of Higher Education.

Nevertheless, despite the effort to include a wide range of data and first-hand experience from both contexts, it is essential, and ethical, to inform and underline a basic fact of any research: there is always, even at a minimum and subconscious level, a certain degree of bias according to the predominant experiences and mental structure of the researcher. As Bereday (1968) writes, "subjectivity is a plague that affects all social classes"[5] (p. 41). Trying to impartially delve into the object of the study, qualitative and quantitative data was gathered and structured according to standards proposed by international organizations, and as far as possible, the research integrates national and supranational sources (abovementioned).

Complementary elements justified and encouraged the choice of these educational realities, namely the economic and cultural worldwide relevance of China and Europe, the significance of teachers and secondary education, the lack of comparative studies focusing on these countries and the research problem of secondary teachers' initial education, and the role of international organizations in education development.

"The first thing that is important to demarcate is the reality or the plot of educational reality subjected to be studied"[6] (García Garrido, 1986, p. 142). In this case, as in any social research, complete educational realities include so many variables that to try to comprise all of them, with the necessary precision and profundity, would require a highly ambitious project in terms of time, economic and human resources.

Owing to certain limitations intrinsic to social studies, but aiming to reach a deep understanding of a certain 'plot of educational reality', this research selected the nations and the elements of the study according to their *comparative character* (according to García Garrido, 1986) and relevance. The research meets the comparative criteria of:

[5] Personal translation from the Spanish version.
[6] Personal translation from the Spanish version.

- Phenomenological character: analysing formal and official structures and quantitative data, and adding references from sociological and psychological studies complementary to the study when referring to qualitative data.

- Plurality: two countries, international standards as auxiliary elements and a historical and cultural perspective.

- Homogeneity: initial teacher education for general secondary education and the abovementioned equivalences in structure, function and context.

- Comprehensiveness (Globalness): inclusion of an analysis of each country's participation in their continent and in the international field, a territorial, socio-political, economic and educational framework, description of cultural differences, educative roles and history and contemporary dilemmas of teacher education. This aspect has a double objective, to provide a comprehensive understanding of each country and to seek neutrality, as much as possible, overcoming subjectivity and ethnocentrism.

Moreover, choosing these comparative areas contributes to finding the necessary correspondence among the components while simultaneously keeping a desirable degree of dissimilarities, providing a motivating perspective to the thesis. Following Nowak's equivalence system (as cited in Phillips, 2006), in this research the equivalences are clearly structural (secondary education as middle stage between primary and higher education with similar lengths and teacher education plans in higher education institutions) and functional (junior secondary education as compulsory, raising the average years of study in both countries and preparing for social and global current needs, and teachers' initial education as a core piece of the education system), but have the advantage and challenge of little cultural and contextual equivalence. Besides these correspondences, supranational standards provide a global equivalence, adding a perspective in which both countries are influenced by international organizations.

2.4.3. TIMING

The research essentially corresponds to a static study, since the parameters and indicators centre on two national current realities, but do not look for convergences or divergences along history or in two different times, among countries or within one country.

However, the combination between outward resemblances and the differences emanating from cultural, political, economic and historical landscapes settled a starting point at which a deep understanding and description of the historical development and previous situation of each country was essential to understand the current state of the core topic. As Emilio Lledó notes, "We are from memory and not only from the small space of a one-time memory, but from the fabric that our actions have been forming and which say how we have come to be"[7] (Lledó, 1998). This statement is consistent with the extensive recommendation and trend of modern comparative studies to include a historical perspective.

In this regard, a general outline of culture and history was relevant to guide the search towards the already mentioned "viability of any imagined constants on the educational phenomena" (being the phenomena of secondary teachers' initial education in China and Spain), as well as to comprehend the evolution and current challenges of secondary education and teacher education systems. The historical view of the general notion of teacher education and secondary education is included in Chapter 3, while the historical evolution of Chinese and Spanish initial teacher education is explained in Chapter 5.

2.5. DESCRIPTION AND INTERPRETATION

This analytical phase includes the explanation and interpretation of the selected parameters and indicators, in separate sections for each country. The researcher has ensured, as a characteristic inherent to the comparative study, that the initial homogeneity is maintained in the structure of the data presentation. At this point of the investigation, the research lists and describes, in a homogenous way, the Chinese and the Spanish systems, and shows all the collected data from the most relevant, reliable, accurate and accessible sources. Data are outlined and classified then presented without any kind of trial or reference to the other unit of comparison, but explained in a contextualized way related to their own national and continental features.

This phase, explained in Chapter 5, focuses exclusively on initial teacher education in each of the countries, mainly in the current situation, complemented by two subsections aiming to draw up a dynamic perspective of the issue. One aims to understand the historical path of the issue (past) and the other to understand the actual dilemmas and upcoming agendas (future).

[7] Personal translation from the Spanish version.

Though the core topic is secondary teachers' initial education, the contextualized explanation is only possible by referring to Chapters 3 and 4 (key concepts and national contexts), due to the fact that "There is a close connection between education and society, a cause and effect relationship. Therefore, the comparative educator should wonder what information gathered by history, sociology, economics and other disciplines, may shed light on the study"[8] (Bereday, 1968, p. 236-237).

2.6. JUXTAPOSITION AND COMPARISON

In this synthetic phase, organized data (in the already established comparison categories), is systematically confronted, looking for convergences, divergences and trends. The researcher graphically expresses the comparison with respect to the parameters of the previous phase. To clearly expose the confrontation, dual-entry tables and graphics are used, depending on the type of data.

Quantitative data are expressed, when possible, through charts and graphics. In some graphics including Chinese and Spanish junior and senior secondary education, and due to the fact that this levels have different lengths in each country, a standardized classification has been made using the term 'grade'. Each grade corresponds to one academic year, starting from Grade 7 (first year of junior secondary school in both countries) to Grade 12 (last year of senior secondary school in both countries). Grade 10 is compulsory in Spain and belongs to junior secondary education, but is not compulsory in China and belongs to senior secondary education. Equivalences for methodological purposes in 'grades' are as follows:

Table 2.7: Equivalences between Chinese and Spanish secondary school organization

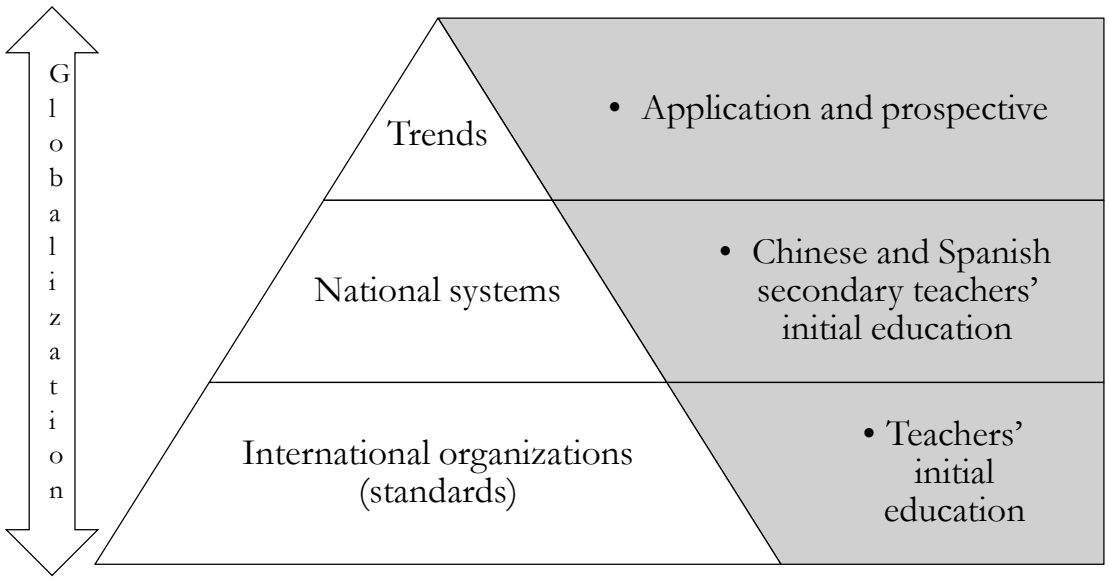
<table>
<tr><th colspan="2">China</th><th>Grades' equivalence for comparison</th><th colspan="2">Spain</th></tr>
<tr><td rowspan="3">Senior secondary education</td><td>3rd （高三）</td><td>12</td><td>2nd</td><td rowspan="2">Senior secondary education</td></tr>
<tr><td>2nd （高二）</td><td>11</td><td>1st</td></tr>
<tr><td>1st （高一）</td><td>10</td><td>4th</td><td rowspan="4">Junior secondary education</td></tr>
<tr><td rowspan="3">Junior secondary education</td><td>3rd （初三）</td><td>9</td><td>3rd</td></tr>
<tr><td>2nd （初二）</td><td>8</td><td>2nd</td></tr>
<tr><td>1st （初一）</td><td>7</td><td>1st</td></tr>
<tr><td colspan="5">Primary education (Grades 1 to 6)</td></tr>
</table>

Source: Researcher's original work

[8] Personal translation from the Spanish version.

In this stage, the first step tackles national data from China and Spain. This comparison is the door to the second step in which national information is triangulated with international standards to look for trends. Each level of policies, as display in the chart, is conceived as open and having a continuous feedback and impact on both international standards and trends. Moreover, national realities are the representation and inspiration of international standards, and the active entities demonstrating modified trends. This chapter seeks to bring to light the underlying relationship between these three elements.

Figure 2.3: Relationship between national and international guidelines



Source: Researcher's original work

This phase gives a meaning to the research from a practical point of view, obtaining differential values to reach the next phase, and subtracts certain differentiating notions implicated in both countries and their secondary teachers' initial education system.

2.7. APPLICATION

This synthetic phase has three main objectives: to collect the key conclusions in a harmonized and significant way, to find possible generalizations of the findings and to contribute suggestions for future agendas. Suggestions for future agendas mainly address the case of Spain, due to the researcher's national background.

After independently studying each national context, it establishes the conclusions and proposals for improvement according to global trends, and under expectations of transferability. Owing to the inevitable small area of study and the constant dynamism of education, it is essential to understand that conclusions and suggestions have to encompass

comprehensive policies and not isolated elements. However, this chapter develops the applications of the findings, contributing to reflecting about practical knowledge and contemporary strengths and weaknesses.

2.8. SUMMARY OF THE CHAPTER

This chapter describes and justifies the use of a comparative education methodology as the main approach of the research, combining both qualitative and quantitative data. It rationalizes the organization of the six stages (identification of the problem and hypotheses, delimitation of the research, description and interpretation, juxtaposition and comparison and application) of this comparative study. To guide the research, this chapter settles the hypotheses, objectives and research questions, which combine to reach a comprehensive view of the problem.

It also rationalizes the selection of the countries, the comparison categories, parameters and indicators of national contexts, and the triangulation of national insights with supranational quality guidelines referring to initial teacher education. This method ends with a section on practical knowledge and the application of the findings, and the key objectives of any current research which aims to improve the object of the study.

CHAPTER 3

THEORETICAL FRAMEWORK

This chapter starts with a historical overview addressing teacher education and secondary education, to latter determine the contemporary notion of these two terms and how this dissertation uses each of them. The second section develops six key concepts of the thesis and explains their significance to design the comparative categories, parameters and indicators. The third explains the relevance of teacher education as a first step towards a better understanding and improvement of the teacher career. To understand how initial teacher education affects the entire career development this section tackles the idea of teachers' identity, status and professionalization and teachers' current dilemmas. The last section explains the relevance of international organizations in the field of education, the concept of supranational policies and the concept of quality of education under an international perspective.

3.1. INITIAL TEACHER EDUCATION AND SECONDARY EDUCATION

During the early 2000s, along with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the 5th World Congress of Education International (2007) highlighted the role of teacher education. They enhanced the figures published by the United Nations (UN), claiming that the world needed to recruit and train over 18 million teachers to achieve the *Education For All* (EFA) goal of universal primary education by 2015. They

also emphasized that "teachers should be trained in and receive their credentials from a higher education institution or its equivalent, and thus be recognized as having the status of professionals by public authorities, parents and students" (Education International, 2007, n.p.). This is only one of numerous affirmations showing how the beginning of the millennium represented the starting point of several international initiatives focusing on teachers.

A 2007 McKinsey report, *How the World's Best-performing School Systems Come Out on Top*, established that the quality of an education system cannot exceed the quality of its teachers, along with two other statements: the only way to improve outcomes is to improve instruction, and high performance requires every child to succeed (Barber and Mourshed, 2007). Two years later, another McKinsey study presented the main lines for improving systems and teachers' performances. In their document, *How to Improve Teachers: Going From Good to Great* (Auguste, Kihn, and Miller, 2010), the proposals fall on recruiting programmes, pre-service education and qualification requirements.

Other international documents giving a main role to teachers include the *Education at a Glance* series. For example, in the 2012 version, referencing the 2005 OECD study, *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, teachers are conceived as a central element for school improvement: "Improving the efficiency of schools depends to a large measure on ensuring that competent people want to work as teachers, and that their teaching is of high quality" (OECD, 2012, p. 489).

The core role given to teachers and their education by many international reports and organizations is, however, verging on crisis in many parts of the world. Some places claim to be out of resources or knowledge; others lack a detailed plan, are required to deal with multiple urgent needs, or do not consider teacher education to be a significant part of a comprehensive solution for their national crisis. As a result, this matter is too often placed at the bottom of their priority list. Nonetheless, in general terms, the international and national efforts are not being overlooked. Teacher education has evolved and has finally led to a large number of universities and institutions attempting to define and establish the main desirable knowledge and procedures for teacher education. Furthermore, because of the progressive distinction between these two stages (primary and secondary education) and after focusing on primary education and its teachers for many years, supranational/international policies are lately centring on secondary education and secondary school teachers. This

chapter aims to frame the general global situation and main concepts regarding teacher education and secondary school.

3.1.1. INITIAL TEACHER EDUCATION: CONCEPTUAL DEVELOPMENT

Conceptual development from the 19th to the 20th century: The beginning of a worldwide notion.

In the late 19th century, a new era in teacher education[9] began. Although as Labardee wrote in 2008, "Teaching existed long before teacher education" (p. 291), it was in this period that the matter acquired greater relevance in societies across the world. Education was becoming more accessible and policies started to focus on establishing unified systems and requisites to obtain a teaching qualification. Teacher education started to become available in most developed countries in the late 1820s and mainly took place in the equivalent of today's secondary schools.

At that time, a generalized definition could not be recognized, since teacher education, as a professional career and concrete concept, was only starting to rise. Regarding secondary education, Dussel (2001) points out the fact that this school period was born between the end of the 19th century and the beginning of the 20th. Consequently, no specific or systematic teacher education could have been determined before the creation of the level. Dussel also argued that, until then, teachers were university graduates or clerics, with a 'licence to teach' issued by the universities.

However, at that stage, the situation was uneven for countries in different continents, and even neighbouring countries. In North America, free public education was emerging, and teacher education standards and wages were being improved. According to *The Canadian Encyclopedia*, Canada's development of public school systems "was marked by the standardization of textbooks, teacher training, classroom organization, and curriculum" (n.d.). In the USA, before the creation of normal schools[10] in the middle of the 19th century, the minimum educational qualification was to have completed the level at which the teacher was working. In the USA, as standards increased over time, the educational requirement

[9] Since documents from different languages, organizations and periods are being used, the term 'teacher education' is proposed as a standardized word which encompasses the main contents examined in this project.

[10] Normal schools refers to specific institutions where many countries educate their teachers.

became completion of the level above that (Labaree, 2008). In the late 19th century, the adoption of a common school model grew over the country, which had 127 public normal schools and a similar number of private institutions, by 1898 (Tyack, 1967 cited in Labaree, 2008). In 1839, the first state-funded school specifically for teacher education opened in Massachusetts.

A similar evolution was also taking place on the other side of the Atlantic Ocean. During the same period, according to Kotthoff and Denk, in most countries in Europe teachers were responsible for transmitting knowledge, skills and competencies; they were also regarded as the key transmitters of national belonging and identity (Kotthoff and Denk, 2007). Normal schools underwent an important change in a majority of European countries: "The coursework stretched out to two or three years and took on a clear dimension of professional training which justified the status of experts conferred on teachers, and their monopoly for intervening in the field of education. In a general sense, one finds, for the first time, a conception of teacher training in which pedagogical knowledge tends to become independent of methodological procedures, thus installing new power relations between those who produce theory and those who produce practice" (Novoa, 2000, p .8).

A parallel path was followed by other countries on all continents. The establishment of normal schools started to be regulated in a high number of countries: in 1886 Japan's ordinance recognized a 4-year diploma for teachers; in 1879 France created the *écoles normales d'institutrices,* where women were prepared to be primary teachers; in 1872 Russia published a statute for institutes to train teachers for the new higher grade schools that were starting to appear in larger towns (Taylor, n.d.). During this period, for the first time, numerous countries in South America created normal schools. For example, Peru and Mexico opened their first normal schools in 1822, Chile in 1842, Argentina in 1870, Uruguay in 1885 and Ecuador in 1899 (Salgado, 2005).

The teacher education system in Africa differed among countries and, as in other parts of the world with similar economic and political characteristics, many did not have one. Some of the reasons academic systems were uneven or inexistent were unstable political situations, lack of resources or territorial and geographical divisions into different tribes often confronting one another. On the other hand, European colonies were developing European-based school systems and a large number of missionaries were arriving in Africa. In South Africa, like in other colonies, "The colonial government became involved in the supply of

education to white children and teachers for White schools were imported from the Netherlands and after 1810 from England. And from the schools which thus served as centres of apprenticeship, teachers training colleges eventually evolved. This occurred towards the end of the nineteenth century" (Wolhuter, 2006, p. 126).

By the end of the 19th century, "teacher education and teacher training became established in the western history of education and history of teaching, and teacher training and education, teaching, teachers, in France, Russia, Japan, by law were by formal teacher training, education through teacher training colleges" (Bansal, 2009, p. 4). Teacher education in many countries at that time followed the German model. It was broadly agreed that teacher education should emphasize teachers' colleges techniques of teaching "not only the subjects of instructions, but also de the method of teaching" (Bansal, 2009, p. 4).

Worldwide, teacher education was spreading, and the creation of a new stage, secondary school, mainly coming from Europe, finally differentiated students and teachers. Teachers progressively moved from being prepared in secondary schools to being educated in higher education institutions. The contents and the responsible institutions of the programmes were gradually defined and the concept of teacher education helped to convert an old occupation into a new profession.

Throughout the 20th century, the classic two-element theoretical division – principles of teaching and school management (Taylor, n.d.) – was replaced by a psychology-sociology-pedagogy triangle as the basis of education science. This variation involved a change in teacher education, starting a new reformist tendency based on scientific knowledge (Novoa, 2000). Through the new century, these three elements have been subdivided into the areas which are currently included in teacher education programmes and curricula.

The notion of teacher education kept gaining relevance since the first decade of the 20th century and started to be compared with traditionally well-considered professions. For instance, Dewey stated, "Whether we, as educators, keep in mind with sufficient constancy the fact that the problem of training teachers is one species of a more generic affair – that of training for professions. Our problem is akin to that of training architects, engineers, doctors, lawyers, etc. Moreover, (since shameful and incredible as it seems) the vocation of teaching is practically the last to recognize the need of specific professional preparation, where is all the more reason for teachers to try to find what they may learn from the more extensive and matured experience of other callings" (Dewey, 1903, p. 571).

Other authors worked to professionalize the teaching profession and to design more effective methods of teacher education. McClelland emphasized the importance of better selection and admission procedures, and denounced as "myopia" the notion of those who thought that "the formation of teachers can be viewed as simply a mechanical process divorced from reference to an overall conception of the meaning and purpose of the life-long learning process in which they will be involved and which should act as the touchstone of their professional life" (McClelland, 1989, p. 21).

Fortunately, since the boost for teacher education as a discipline of its own at the beginning of the 20th century, statements and studies about the teaching profession did not cease. In *Pedagogy of Freedom*, Freire specifically challenges teacher education and teacher programmes to be aware of the kinds of knowledge essential to all teachers, the knowledge of a pedagogy which creates the circumstances for knowledge construction, or the knowledge to help their students to develop strong curiosity whilst simultaneously developing affective intelligence, among others (Freire, 1998).

In the early 1990s, Perrenoud formulated a key question: "Is it enough to have a good education to teach well?" The author added some answers to complete teacher education (Perrenoud, 1994, p. 71)[11]:

- Education should not only prepare to follow ideals, but to preserve the practical constraints facing the practice;

- Education, as a prescriptive message, cannot constantly be contradicted by other messages received by teachers;

- The school system operation should offer teachers a personal interest in implementing the received education.

At that time, besides the role of teacher education, one of the main concerns was the upgrading of teacher qualifications and requirements and, thereby, the promotion of teacher education and salaries (Garrouste, 2010). Higher education institutions, superior normal colleges, education faculties and pedagogical universities appeared. Diverse patterns arose. While most teachers' qualifications required university level education, other systems offered a middle-high or middle-senior education programme, whose education focused on the

[11] Personal translation from the French version.

teacher-to-be for lower education levels, early childhood education or primary school. In general, programmes still widely varied from 2 to 5 years, and were conducted in professional institutions and/or higher education institutions. During this century, the profession suffered a feminization process.

According to the *Encyclopedia Britannica* (Taylor, n.d.), until the mid-1960s, in many European countries (Austria, Belgium, Spain, France, Italy, Iceland, the Netherlands, Switzerland, and Turkey), Latin America countries, and a number of Asian countries, a normal-school pattern applied for primary school teachers. However, because of the general growth of secondary schools in most of these countries, secondary school teacher education was more complicated to design. This is the origin of a tendency to educate primary and secondary teachers alongside one another in post-secondary colleges or in multipurpose universities. Alternative paths were offered in many countries, and specialized higher education institutions became widespread.

During that period, a great expansion of teacher education took place and many teacher education colleges were founded all over the world, for instance, in Canada, the Rosehaven Normal school in 1912, the first Provincial Normal School in British Columbia in 1901, or the Edmonton Normal School which opened in 1920. In USA, most teacher colleges opened between the middle of the 19th century and the early 20th, such as the Sam Houston Normal Institute in 1879 or Eau Claire Normal School founded in 1916.

Also in Asia many normal universities arose. Beijing Normal University was opened in 1902, East China Normal University (Shanghai) in 1951; the National Taiwan Normal University was inaugurated in 1946, the Philippines Normal School was established in 1901 and became the Philippines Normal College in 1949.

Other countries, still ruled as colonies, such as Malaysia, Burma, Indochina or Vietnam, were adapting their systems to western education, establishing schools, teacher education institutions or universities. As an example, Vietnam's first Teacher Training College was inaugurated in 1917. Dang claims that Vietnamese tertiary education level, which mainly focused on teacher education, was heavily based on French programmes and contents until the end of French domination in Indochina in 1954. Curricula were translated from French materials and adapted to the local situation (Dang, 2009). This condition was replicated, also by the French government, in Cambodia (Clayton, 1995).

In South America, during the early 20th century, secondary education expanded through most countries, and as a consequence, a great effort was made to create tertiary institutions. But still, most countries' priorities centred on improving the quality of primary education through curricular changes and teacher training (UNESCO, 2000a). In this geographical area, during the first half of the 20th century, the number of normal schools increased in all countries, higher pedagogical institutes appeared and some faculties of humanistic sciences incorporated Pedagogy as a degree. Some European (German, Belgian and French) experts arrived to manage the teacher education process in several countries, and some nations attempted to establish new legislation on this topic. The second half of the century disclosed the most noticeable changes. Education, and therefore teacher education, became one of the responsibilities of the states, teacher education rose to tertiary level, the concept of lifelong education of teachers was developed and, through legal standardization, all countries unified their teacher education systems nationwide (Salgado, 2005).

At the beginning of this period, the situation in Africa remained very similar in many aspects. However, from 1950 to 1980 a significant decolonization process occurred in several countries such as Botswana, South Africa, Ghana, Nigeria, Kenya, Cameroun and Gabon. As a result, numerous states gained their independence and started building their own academic systems, abolishing racial segregation. Nevertheless, international organizations and non-governmental organizations provided support to rebuild and reform their school structures, which remained very similar to the previous European-based models. As for teacher education, schools for teacher education started to develop, for example in South Africa, where the Department of Education set up a systematic package of support and incentives for teacher training (Crouch and Vinjevold, 2006). In Ghana, the Akatsi College of Education was established in 1963, and Kenya went through a notable growing process of teachers' colleges such as the Maseno Govt. Training Institute, Siriba Teachers College (1955), the Primary Teachers' Training College (1965) and the Secondary Teachers' College (1983) in Kisii, or the Tambach Teachers College (1991). Many of the teacher colleges were built with the support of the World Bank.

While most of the world was nationally harmonizing its teacher education systems, Europe was expanding this tendency towards neighbouring countries. As a consequence of the political initiatives which began after World War II, the strongest changes in teacher education notions and policies took place in Europe by the end of the century. The offset of an economic and political union as a consequence of the Schuman Declaration (1950), started

with the European Coal and Steel Community in 1951, and laid the groundwork for a greater coalition among the European countries. At that time only six European nations (Belgium, France, Germany, Italy, Luxembourg and the Netherlands) formed this international organization, the main objective of which was to intertwine the national strategic markets of steel and coal so tightly that a new war would just have been too expensive and unproductive, and to bring powerful European countries closer after the global war ended. Eventually it became the cornerstone of a phase of peace without precedent in Europe.

In 1957, the Treaty of Rome created the European Economic Community (EEC), as a voluntary intergovernmental cooperation among the six countries named above. The number of Member States gradually increased and when, in 1993, the Maastricht Treaty changed the name to European Union, there were already twelve[12] countries forming the Union. The new name came with new and wider philosophies: it extended the coalition goals to multidisciplinary policies, including social and educative agreements. Nowadays 28 countries are Member States of the EU, including Spain, one of the countries considered in this research.

Europe started to compare and evaluate the education systems of its members as a prelude to system harmonization. The European Commission aimed to initiate an international study on teacher education in the Member States, and in 1994 the SIGMA research was released. As a result, the Thematic Network in Teacher Education in Europe was founded in 1996 (Kotthoff and Denk, 2007), under the Socrates programme. For the first time, a European-wide network for teacher education was created, where teacher educators, institutions of teacher education, decision-makers and practising teachers could exchange opinions. This initiative allowed Europe to study and understand other teacher education systems.

Each Member State prepared assessments and analysis reports for the programme. The results were shared at a major conference in Osnabrück in June 1995 and later published in book form.[13] The book offers similarities and differences among the EU-15 teacher

[12] The original twelve countries were: Belgium, Denmark, France, Germany, Greece, Italy, Luxembourg, the Netherlands, Portugal, the Republic of Ireland, Spain, and the United Kingdom.

[13] Further information about this matter can be consulted on the TNTEE website through the European Conference on Teacher Education in Europe: Evaluation and perspectives (Paper, chair

education system in terms of institutional, administrative and organizational aspects, models of initial teacher education, routes and results of initial teacher education in the teaching-learning processes, and detected new needs and measures in teacher education.

Another main element strongly influenced the international scenario since the second half of the 20th century. As a result of the period of peace following World War II, the foundation of many international organizations took place, some centring on education and human development as their main concern. Many of these institutions, such as the World Bank (1944), the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 1945) or the Organization for Economic Cooperation and Development (OECD, 1961), are still very representative in our current educational context.

As an example of this new cooperation trend, the EFA programme was created in 1990 by 155 countries and 150 governmental and non-governmental organizations. As a result, specific reports were conducted over various regions in the world. Teacher education was already present in these studies, as proved by the fact that the Assessment of Basic Education in Sub-Saharan Africa (1990–2000) encouraged the acceleration of teacher education and recruitment to reduce losses of personnel (UNESCO, 2000b), and the Caribbean assessment (UNESCO, 2000c) and the Arab States report (UNESCO, 2000d) dedicated chapters to teachers, mainly focusing on academic qualification, and placed teacher education as a key to eliminate gender stereotypes and sexist practices (UNESCO, 2000d). In a similar line, the American research mentions the need for "quality of teaching personnel, defined in terms of academic preparation" (UNESCO, 2000a, p. 21).

To sum up the most important events during the 20th century, we can highlight four actions: the expansion of qualifications in teacher education, the creation of higher institutions for teacher education, certain European models becoming an example for other systems in the world and the formation of international organizations focused on education.

Evolution of the concept during the 21st century: globalization and international organizations, drawing attention to education.

In this period, teacher education has traditionally been conceptualized in two phases: initial and continuing education. The first step, secondary teachers' initial education, is still

for sessions) Universität Osnabrück 22-24 June 1995 Germany. Retrieved from http://tntee.umu.se/archive/sigma_pp/sigma_pr_en.html [January 23, 2015]

for many authors, during our century, a problem that has been poorly solved (Marcelo, 2009, p. 31). Secondary school teachers are still the hardest to attract into the profession, the hardest to qualify and the hardest to retain (Moreno Olmedilla, 2006). Too little attention has been paid to the evolutionary aspects of the process of learning to teach, from initial training to insertion in lifelong learning (Berliner, 2000, in Marcelo 2009, p. 36). During the 21st century, the education structure has been widely criticized in relation to its bureaucratic organization, the disconnection between theory and practice, the imbalance between pedagogical and subject knowledge, the lack of learning communities or weak links with schools, among other aspects (Smith, 2000; Feiman-Nemser, 2001; Kalantzis, Cope and Harvey, 2003; Darling-Hammond, Hammerness, Grossman, Rust, and Shulman, 2005; Levine, 2006).

Simultaneously, some authors have tried to detect the foundations of general teacher education. Cochran-Smith, Feiman-Nemser and McIntyre (2008) organized it under nine basic questions: What's the point? What should teachers know? Where should teachers be taught? Who teaches and who should teach? Does difference make a difference? How do people learn to teach? Who's in charge? How do we know what we know? What good is teacher education? As a general description, Wiswa Warnapala defines teacher education as "the knowledge and skills which are relevant to the life of a teacher, as a teacher. A course in teacher education should make an attempt to re-shape attitudes, re-model the habits and, in a way, re-constitute the personality of a teacher". Warnapala added other important objectives for teacher education like converting the student into an "intellectually committed person to the profession" with perfect ethics (UNESCO, 2000e, p. 57).

During this century, new specific elements, somehow not particularly relevant in the past century, have come onto the scene. Education for teachers who wanted to work with children with special needs, multicultural education or adult education, became regular terms in debates and legislations. Lewis and Bagree (2013) state, "It is vital for trainee teachers to learn about inclusive education from day one of their training, so that focusing on quality and inclusive teaching and learning is seen as a natural part of every teacher's job" (p. 13). The authors also affirm that "Practice-based teacher training needs to be relevant to the local context and culture, and needs to be a well-managed process so that teachers/trainee teachers are not overwhelmed" (Lewis and Bagree, 2013, p. 16). Another common principle in the 21st century is to associate initial teacher education with other educative phases, basing theories on a lifelong learning paradigm, such as Vaillant (2007) who states that "initial

teacher education is the first access point to the continuous professional development" (Vaillant, 2007, p. 209).

Concurrently, many researchers have targeted the concept of the practicum. This new period started gaining ground in most teacher education systems from the beginning of the century. The trends advocate for an effective balance of theory and practice (Lewis and Bagree, 2013), and for an explicit and coherent conception of the articulation between theory and practice and the professional skills built in the process (Perrenoud, 2001).

Additionally, qualifications and quality have become two of the main references when defining and analysing teacher education. These elements eventually shifted from a nation-centred theory to an international point of view. As a sequel to the prior era, the 21st century began to be immersed in a harmonization dynamic, approaching teacher educative paths and designs from all over the world. In the course of the next period, numerous international organizations gained relevance and became more active in the international context.

The expansion of international organizations was possible as a consequence of another process: globalization. Globalization somehow distanced teacher education from the limited needs of national contexts and brought it into international settings. The beginning of this century came along with a strong globalization of national economies, new dilemmas in societies, new methodologies in schools and new skills for students. All these changes brought inevitable new concepts to the meaning of being a teacher, and how to prepare a person to reach a good teaching performance.

Globalization definitions mainly connect national and international dialogue. When referring to education, the emphasis is frequently placed on communication changes, flexibility of mind-sets to create relationships among people throughout the world and leading with different cultures, understanding of human conflicts, diversity, economic systems and global education.

Internationally, the interaction between globalization, education and international organizations has been strained, since "the combination of economic restructuring in the world economy and the powerful ideological conceptions of how educational delivery needs to be changed, spread by international institutions as a consequence of the globalization process, is having a significant impact on educational systems worldwide" (Carnoy and Rhoten, 2002, p. 2). Anthony Giddens (1990) describes globalization as "the intensification

of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa" (p. 64), which lead to the fact that "the world system and global economy are facing a fundamental restructuring and an on-going process of globalization, leading to the development of a knowledge-based Global Information Society" (Cogburn, 1998). This new global-society paradigm also involves the educative field, as one of the main agents in transmitting, promoting and managing information and knowledge. Globalization symbolizes a paradigm shift from a monocultural approach to a multicultural approach with attendant implications for changes in school curricula and attendant practices (Srikant, 2012).

Andy Green defines the term globalization as "the rapid acceleration of cross-border movements of capital, goods, labor, services and information – a process that has intensified since the 1970s as a result of three major factors: cheap energy and transportation; the growth of information and communications technologies; and the impact of the financial and trade liberalization". However, Green also warns, "Globalisation inevitably disorganises social structures and dislocates communities. It has an irrepressible energy to invent and re-structure. It shifts jobs; uproots populations; transforms institutions and evaporates social conventions" (Green, 2007, p. 67). Therefore, it is pertinent to highlight that the relationship among all these agents cannot, and should not, be understood without taking into account social responsibility, which leads to the use of the new tools and possibilities as a way to promote sustainable growth.

Globalization has radically changed the rules and parameters within which our societies and citizens must interact, and when targeting education, particularly higher education, the 21st century brought some proposals to steer the multiple possibilities globalization offers. As Stiglitz states, "Globalisation itself is neither good nor bad. It has the power to do enormous good.… But in much of the world it has not brought comparable benefits. For many, it seems closer to an unmitigated disaster" (Stiglitz, 2002, p.2 0).

In his *Introductory Paper for the UNESCO Expert Meeting* in 2001, Van Damme includes some considerations linking globalization and higher education, the level at which it is advised to prepare secondary teachers. He states, "Globalisation and the transition to a knowledge society seem to create new and tremendously important demands and exigencies towards universities as knowledge-centres" (p. 2). Still, responsibility must be shared, since

"the concept of globalization indicates that the various changes are somehow interrelated and creating new forms of interdependencies between actors, institutions and states" (p. 1).

Van Damme highlights some contemporary facts: the increase in the demand for higher education worldwide, as society asks for more highly qualified knowledge workers; the erosion of the national regulatory and policy frameworks in which universities are embedded as a consequence of internationalization and globalization; or the emerging "borderless" higher education market.

He finally offers some suggestions to help globalized higher institutions, such as the establishment of an international regulatory framework containing some basic elements of a professional code of good practice, the removal of existing barriers to mobility of students and staff, international transferability and recognition of qualifications and credits, an international approach to quality assurance and accreditation, and directly linked to teachers, some basic rules for granting providers the 'licence to teach'.

As said above, and stressed by many authors (Carnoy and Rhoten, 2002; Collins, 2011; Maldonado, 2000; Van Damme, 2001; Valle, 2012), this common framework is undoubtedly related to the work, actions and researches done by international organizations. Hence the emphasis and definition of teacher education is no longer exclusively related to one country, since most of them have already become part of certain international or supranational conventions and/or agreements.

The main worldwide example is the United Nations (founded in 1945), upon which depend numerous programmes and projects such as the United Nations Children's Fund (UNICEF, 1946), focusing on children's development and rights; the United Nations' global development network, the United Nations Development Programme (UNDP, 1965); the specialized agency of the United Nations Educational Scientific and Cultural Organization (UNESCO, 1945), the main purpose of which is to promote international collaboration through education, science, and culture seeking for peace and security; or the World Bank (1944), whose official goal is the reduction of poverty.

Specifically centring on education, the UN established the International Bureau of Education (UNESCO-IBE, 1925) the main objective of which is to enhance quality education for all; and the UNESCO-based worldwide association of higher education institution, the International Association of Universities (IAU, 1950).

It is also worth mentioning the Organization for Economic Cooperation and Development (OECD, 1961), which aims to help governments to foster prosperity and fight poverty through economic growth and financial stability. This organization carries out studies and research in education, mainly statistical analysis, which play an important role in the international context. Due to this involvement in education, these international organizations are taken in this thesis as references to analyse international standards.

Due to the birth of the international organizations and globalization, educative philosophies became more comprehensive during the 20th century. The relevance of teacher education and the institutions in which teacher education takes place started to be noteworthy at an international level, as UNESCO (2005a) highlights, combining education, society development, economy, globalization, lifelong learning and teacher development, among others:

> "Institutions of teacher education fulfill vital roles in the global education community; they have the potential to bring changes within educational systems that will shape the knowledge and skills of future generations. Often, education is described as the great hope for creating a more sustainable future; teacher-education institutions serve as key change agents in transforming education and society, so such a future is possible. Not only do teacher-education institutions educate new teachers, they update the knowledge and skills of in-service teachers, create teacher-education curriculum, provide professional development for practising teachers, contribute to textbooks, consult with local schools, and often provide expert opinion to regional and national ministries of education. Institutions of teacher education also perform similar services for school principals who have significant impact on what occurs in schools. Because of this broad influence in curriculum design and implementation, as well as policy setting within educational institutions, faculty members of teacher-education institutions are perfectly poised to promote education for sustainable development (ESD). By working with the administrations and faculties of teacher education institutions, governments can bring about systematic, economically effective change." (UNESCO, 2005a, p.11)

Some of the proposals to promote teacher education, such as the one made by UNESCO (2005b), encourage nations to address environmental, social, and economic contexts to create locally relevant and culturally appropriate teacher education programmes for both pre-

service and in-service teachers. UNESCO also states, "While the balance between academic and practicum has to be ensured in teacher preparation, a major effort has to be made to ensure that teacher preparation is aligned with the intended school curriculum" (UNESCO, 2012a, p. 3).

International organizations spur countries on "to reconsider the current approaches to teacher preparation in order to align institution-based teacher training to classroom requirements and intended curricula" and stress the use of diversified teacher training strategies, including a better use of technology-based training (UNESCO, 2012a, p. 3).

A similar suggestion is made by Schleicher (Schleicher, 2011), when identifying several characteristics of high-performance teacher education systems (later extended regarding international quality standards). The author detects that, "Education systems benefit from clear and concise profiles of what teachers are expected to know and be able to do in specific subject areas. Such profiles can guide initial teacher education (…)" (p. 19). Referring to the abovementioned balance between practice and academic subjects, the author suggests initial teacher education programmes as "a model based less on academic preparation and more on preparing professionals in school settings, with an appropriate balance between theory and practice", and stresses that "More flexible structures of initial teacher education can be effective in opening up new routes into the teaching career, without compromising the rigor of traditional routes" (p. 14).

Internationalization also allows research to be conducted in specific areas of the world, encouraging countries to follow comparable routes while protecting their own cultures and meeting their own necessities. Nonetheless, this century is far from being worry-free, and as the analysis in the previous section showed, dissimilarities are still noticeable around the world.

The central concern in the Asia-Pacific region, as in other emerging regions such as Africa, is to establish and unify teacher education systems nationwide. As Den Brule writes in an UNESCO report relating to standards in the Asia-Pacific, "For teachers, the lack of standards (including a rigorous assessment of pre-service teacher graduates) suggests great variability in the quality of the teaching workforce" (Den Brule, 2008, p. 8). Similar difficulties are detected in Africa.

Some data from these areas also underlines that "the fragmentation between pre-service and in-service providers may mean that university faculty have minimal or no interaction with practitioners while in-service teacher resource centers may be cut off from access to current research and professional development funds" (UNESCO, 2008, p. 4).

To manage contemporary complexity, teachers need transversal competencies such as flexibility, versatility and openness. To be meaningful, the strategies must be registered within a training process or a process that promotes updates in professionalism, integrated initial and ongoing training that obeys globalization and new world citizenship (UNESCO, 2005a).

UNESCO also recommends the creation of universities to develop initial education for new teachers in higher education centres, since the teaching profession is a career that requires constantly updated initial specific training.

In South and Latin America, structures and programmes have been further developed, however related worries are noticed: lack of incentives to turn teaching into a first-choice career, lack of appropriate teacher education and professional development (Vaillant, 2007), significant differences in the proportion of teachers who have a tertiary degree, the excessively theoretical emphasis of the education with little aimed to develop specific behaviours and teaching practices (Vaillant, 2013); the importance of developing innovative practices including affective aspects or the priority of changing from individual work to teamwork (Tedesco, n.d. cited in Falus and Goldberg, 2011), among others.

Yet again, in the 21st century, Europe enacted drastic reforms, which involved all the 28 Member States. The EU affirms on its website that "Initial education and continuous professional development of the highest quality, and access to support throughout their careers are both essential". This matches with the lines proposed by the European Commission's Communication *Rethinking Education* (2012a), where Member States are prompted to revise and strengthen the professional profile of all teaching professions (teachers at all levels, school leaders, teacher educators).

Established as a priority for all Member States, the implementation of reforms aimed to review "the effectiveness as well as the academic and pedagogical quality of initial teacher education, introducing coherent and adequately resourced systems for recruitment, selection, induction and professional development of teaching staff based on clearly defined

competences needed at each stage of a teaching career, and increasing teacher digital competence" (European Commission, 2012a, p. 15).

According to the European Network on Teacher Education Policies [14] (ENTEP), formally launched in 2000, almost all countries introduced reforms in initial primary teacher education after the initiation of the Bologna Process (1999); all countries required a degree at higher education level to become a primary teacher, in most cases a Bachelor-level degree. After focusing on primary education, the research reached the conclusion that most countries apply the concurrent model (generally combining educational sciences with teacher education), and the duration of the education varies across countries, ranging from 3 to 5 years (Dimitropoulos, 2008).

These reforms relied on the main agreement in Europe concerning higher education, and consequently teacher education: the creation in 2010 of the European Higher Education Area (EHEA). This agreement was intended to ensure more comparable, compatible and coherent systems of higher education in the Member States. Europe then designed a common higher education institutions framework and the EHEA became a reality with the Budapest-Vienna Declaration (European Union, 2010), along with the Bologna Process' decade anniversary. The EHEA is further detailed in the next chapter.

As shown in this chapter, evolution in teacher education has gained relevance worldwide, becoming a more concrete notion, evolving from being a national matter to be measured by international guidelines. However, some differences in ways of growing, vocabulary references and paths still remain. Before reaching the concept of secondary education, some clarifications on teacher education as a contemporary notion used in this essay should be made.

3.1.2. INITIAL TEACHER EDUCATION: CONTEMPORARY NOTION

Reading the previous section, it can be noted that different international organizations refers to the first step of teacher education using uneven terminology. Unifying the criteria can be complicated, since their audience and studies are located in different areas with

[14] The European Network on Teacher Education Policies can be accessed at: http://entep.unibuc.eu/

different educative systems. The aim of this section is to justify and clarify the selected term, initial teacher education, already included in the title of the research.

The lack of consensus is even noticeable in documents from the same contexts. As an example, the Conclusions of the European Council in 2008 (Council of the European Union, 2008a), in *Preparing Young People for the 21st Century: An Agenda for European Cooperation on Schools*, references other European documents where four categorizations can be found: (1) initial and continuing education; (2) initial and in-service training; (3) teachers' initial training, early career support and professional development; and (4) initial teacher education, early career support and continuing professional development.

As shown in the above paragraph, extremely scattered categorizations can be found: from the archaic philosophies exclusively worried about initial teacher education, going through the classic two-stage classification theories – initial/pre-service and continuing/in-service education – to very detailed classifications focused on the new lifelong learning paradigm. As an example, one of the classifications in *Supporting Teacher Competence Development for Better Learning Outcomes* (European Commission, 2013a) includes five steps linked to the continuum of teacher education: initial teacher education, induction or probationary period, early professional development, continuous professional development and leadership development.

Nowadays, most theories consider teacher education to be divided into three stages, though giving them dissimilar names. The *International Encyclopedia of Teaching and Teacher Education* (Dunkin, 1987) chooses pre-service, induction and in-service; among others, the EU (European Commission, 2013a) refers to it as initial teacher education, induction and continuing career, and the OECD (2005a) mentions initial teacher education, induction and professional development.

Besides the categorization of the steps to become a teacher, another concern is taking place in contemporaneous systems, which focus on pathways' coherence. According to the last-mentioned document, "The stages of initial teacher education, induction and professional development need to be much better interconnected to create a lifelong learning framework for teachers", and also "Initial teacher education […] needs to develop the skills for reflective practice and research on-the-job" (OECD, 2005a, p. 10). This difficulty is currently being treated through a middle stage placed between initial education and in-service

education, the induction period, the importance of which has recently been given great consideration.

Institutions have tried to define teacher education and to find common standards to promote worldwide. As a general definition, we can address UNESCO's (2011a) statement: "Pre-service teacher training is the training that occurs before teachers enter the profession and/or take up employment in a range of different education institutions" (p. 12). This has also been considered as the official minimum education required, in the educational policy of each country, to start working as a fully qualified teacher. It includes all educative paths, from the compulsory levels (usually primary school) to higher education. This education typically includes different kind of didactics, subject knowledge and classroom practices.

At the basis of this research, another two concepts need to be clarified: education and training. These terms have often been assumed to be interchangeable; however, the original meanings show a substantial difference, as they are nowadays understood. Training is related to practical skills: it can be defined as "The process of bringing a person to an agreed standard of proficiency by practice and instruction" (Collins English Dictionary, 2003), the "Repetition of an action so as to develop or maintain one's skill" (American Heritage Dictionary Editors, 2013) or "Organized activity aimed at imparting information and/or instructions to improve the recipient's performance or to help him or her attain a required level of knowledge or skill" (The Business Dictionary, n.d.). Generally, training is related to a specific job: "Training endeavors to impart knowledge, skills and attitudes necessary to perform job-related tasks. It aims to improve job performance in a direct way" (Truelove, 1992, p. 273).

Education, on the other hand, is a more complex concept. It includes a theoretical basis, which is the main factor, and it may also include the abovementioned practical training, but that element is not necessarily present. The *Collins English Dictionary* defines it as "the act or process of acquiring knowledge, systematically during childhood and adolescence; particular kind of instruction or training; the theory of teaching and learning" (2003), the *American Heritage Roget's Thesaurus* states that education is "the act or process of imparting or acquiring general knowledge and of developing the powers of reasoning and judgment; the result produced by instruction, training, or study" (American Heritage Dictionary Editors, 2013), whilst for the *Business Dictionary*, education refers to "The wealth of knowledge acquired by an individual after studying particular subject matters or experiencing life lessons that provide

an understanding of something. Education requires instruction of some sort from an individual or composed literature. The most common forms of education result from years of schooling that incorporates studies of a variety of subjects".

Robert H. Essenhigh (2000) makes a simple but concise affirmation to understand the difference between these two terms, connecting training to *know how* and education to *know why*. He stated "It's the difference between, say, being trained as a pilot to fly a plane and being educated as an aeronautical engineer and knowing why the plane flies, and then being able to improve its design so that it will fly better. Clearly both are necessary (…)". He also implies the need to develop an empathic component in education, when affirming that "The difference, also, is fundamentally that Know How is learning to Think Other People's Thoughts, which indeed is also the first stage in education – in contrast to learning to Think Your Own Thoughts, which is why Know Why is the final state of education" (Essenhigh, 2000, p. 46).

In this research, it is considered that teacher education, as a complete process, includes three stages: initial teacher education (which may include a phase of pre-service training and/or practicum), induction and in-service training or continuing professional development. Their general characteristics are described below, taking into account the inherent international variety.

- Initial teacher education: this stage corresponds to the foundation and basic period of teachers' learning. Students are not yet teachers, nor have or need previous teaching knowledge or experience to enrol in these programmes. It is also the minimum qualification to access the teaching career. Despite the fact that initial teacher education markedly differs among countries, programmes are generally provided in universities or higher education institutions. Their general design is theory-based, although it is also common to include practical classes or periods inside schools or other educational structures, but students cannot be completely autonomous or responsible for a class.

- Induction: this stage focuses on novice teachers who have recently started their career, and usually refers to the first teaching year. This phase is separated from universities or higher education institutions, and takes place within the new workplace (schools). The main objective is to help and orientate newcomers to

school teaching and to enhance their skills and teaching practices, as well as to help them know their students, school context and co-workers. Since this support is school-based, other colleagues are often responsible for designing these dynamics, along with the principal, other administrators, and/or the department chair. A mentor is regularly designated to advise novice teachers.

- In-service training or continuing professional development: this education focuses on teachers who already hold a teaching degree and have some experience. It is considered a lifelong learning process, since it evolves along their entire career as teachers and has as its goal to improve teaching skills and to update teachers' knowledge.

The core topic of this research makes reference to the first phase for secondary teachers, namely initial teacher education.

3.1.3. SECONDARY EDUCATION: CONCEPTUAL DEVELOPMENT

As a result of modern societies, new labour and market requirements, as well as economic changes, there is a worldwide growing demand for secondary education. After reaching a notable high attendance for primary education, which was one of the main objectives of the abovementioned EFA programme, most countries started focusing on universal access to secondary education. Numerous nations are making lower secondary education a compulsory level: lower secondary education is currently obligatory in approximately 80% of countries in the world (UNESCO, 2011b). Society and market demands have increased the need for both lower and upper secondary education. The chances of being employed and raising the status and payment of an occupation increase as educational attainment increases, and workers with upper secondary education earn higher salaries than those with a lower level of education (UIS and OECD, 2003 cited in UNESCO, 2011b).

In this scenario, international, supranational and national policies and actions have started to look towards the achievement of the EFA's Educative Goals (UNESCO, 1990) 3, 5 and 6. Goal 5 "Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality", has already advanced the change on perspective when referring to basic education, including secondary education for all. Goal 3, "Ensuring that the learning needs of all young people and adults are met

through equitable access to appropriate learning and life-skills programmes" and Goal 6, "Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills", have become central due to the actual significant nexus between academic level and working position.

According to the UNESCO website, there has been a widespread expansion of secondary education in all regions of the world, especially in those of an emerging nature. However, the situation differs substantially across regions. Sub-Saharan Africa, where the percentage of the Gross Enrolment Rate (GER)[15] for lower secondary education has grown from 28% to 43%, showed the most remarkable increase from 1999 to 2009. Even though notable efforts and improvements have been made in the region, it is still the area showing the lowest rate of participation in secondary education and the most severe gender disparities.

From the data in the UNESCO (2011b) report, similar relevant facts can be deducted. The study tackles a 39-year period, from 1970 to 2009, when the total number of secondary school students around the world almost tripled. Globally, there were 196 million secondary students in 1970, 43% girls and 57% boys. These percentages showed, in 2009, a more equal proportion of 48% girls and 52% boys, with an increase to a total of 531 million secondary school students.

During these four decades, the GER rose from 43% to 68% worldwide, with uneven growth rates in different areas. The increment rate in North America and Western Europe was modest, due to long tradition of attending secondary school, and the increase in the school-age population. Meanwhile, the change was more noticeable in the Arab States, with original drastic disparities in the rate for boys and girls, and endured in Latin America and the Caribbean, where gender parity is historically very common and where the secondary percentage for girls (93%) exceeded, in 2009, that of boys (86%).

Large and populous countries experienced major changes. They had relatively low percentages of population attending secondary education at the end of the last century, but globalization with its increased demand for qualified labour has driven numerous reforms and initiatives. At a national level, Brazil, Mexico, China and India are four of the most

[15] As described by UNESCO, the Gross Enrolment Rate (GER) provides a measure of the capacity of education systems. It is the rate of total enrolment, irrespective of age, of the targeted population.

representative countries leading the development of secondary school attendance. Brazil raised the number of students from 4.6 million in 1971 to 23.6 million in 2009 and a comparable expansion took place in Mexico, rising from 1.6 million in 1971 to 11.5 million in 2009. The two most populous countries in the world, China and India, experienced the most remarkable development. China doubled the number of students from 52 million in 1991 to 100 million in 2009, and India almost multiplied its initial secondary student number by five, increasing from 21 million to 102 million.

These facts confirm what Psacharopoulos and Patrinos stated in 2002: "The social returns on investment are greater than in higher education regardless of the income level of the country" (Psacharopoulos and Patrinos, 2002 cited in UNESCO, 2011b, p. 7).

Nevertheless, some characteristic should be taken into account when making an overview of secondary education throughout the world. (1) Costs for secondary education per student are higher than primary education and few low-income countries can afford to offer that level for free; (2) even in some of the world's richest countries, completion of secondary school is one of the main challenges, as shown by a high dropout percentage during this education level; and, (3) greater access to secondary education should be completed with a strategic plan to keep and raise programmes' quality.

Therefore, the main challenges concern access, quality and achievement rather than participation. According to UNESCO (2011b), "While participation at the secondary level has grown significantly in many countries, equitable access and completion—as well as the quality and relevance of secondary education—represent major challenges" (p. 7).

Now that the attendance rate at secondary education, both lower and upper, is growing all over the world, authorities are implementing educational policies to make the best out of this situation. These policies are to be understood, internationally, under a common framework. Therefore, it is relevant to clarify the meaning of 'secondary education' under an international perspective and as a key reference in this research.

3.1.4. SECONDARY EDUCATION: CONTEMPORARY NOTION

As a part of a complex, dynamic and continuous construct, teacher education is inevitably related to the final reality of teachers: their workplace. The workplace is, in this case, secondary school. However, at international level, secondary school does not have a concrete

meaning, if not related to the already cited International Standard Classification of Education (ISCED), designed by UNESCO.

The first ISCED classification was developed in the 1970s, and reviewed in 1997, with the aim to facilitate comparisons of education statistics and indicators. The version was recently revised, in 2011, and analysed and detailed during 2011 and 2012, to become the ISCED-F 2013. However, the statistical world will not implement the new manual before 2015/2016. Hence, this study uses ISCED 2011.

ISCED launched benchmarks and indicators for educative systems, and also offers some common definitions to carry on comparative studies. In ISCED 2011, some of the relevant terms for this study are defined as:

> Education programme: coherent set or sequence of educational activities or communication designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period. Objectives encompass improving knowledge, skills and competencies within any personal, civic, social and/or employment-related context. Learning objectives are typically linked to the purpose of preparing for more advanced studies and/or for an occupation, trade, or class of occupations or trades but may be related to personal development or leisure as well. A common characteristic of an education programme is that, upon fulfilment of learning objectives or educational tasks, successful completion is certified (UNESCO Institute for Statistics, 2011, p.7).
>
> Education level: ordered set, grouping education programmes in relation to gradations of learning experiences, as well as the knowledge, skills and competencies which each programme is designed to impart. The ISCED level reflects the degree of complexity and specialization of the content of an education programme, from foundational to complex. (UNESCO Institute for Statistics, 2011, p.13)

In this new classification, education systems are divided into 9 levels:

- ISCED 0: early childhood, no duration criteria
- ISCED 1: primary school, duration typically varies from 4 to 7 years.
- ISCED 2: lower secondary education, duration typically varies from 2 to 5 years.

• ISCED 3: upper secondary education, duration typically varies from 2 to 5 years.

• ISCED 4: post-secondary non-tertiary education, duration typically varies from 6 months to 2 or 3 years.

• ISCED 5: short-cycle tertiary education, duration typically varies from 2 to 3 years.

• ISCED 6: Bachelor's or equivalent, duration typically varies from 3 to 4 years.

• ISCED 7: Master's or equivalent, duration typically varies from 1 to 4 years.

• ISCED 8: Doctoral or equivalent level, duration is a minimum of 3 years.

• ISCED 9: Others.

For the purpose of this research, the analysis focuses on teachers working in ISCED 2 (lower secondary education) and ISCED 3 (upper secondary education). Lower secondary education is also known as junior or middle school education, while upper secondary education can be found under the terms senior or high school education.

These two levels show some differing features. ISCED 2 is, according to UNESCO, a transition point where the system and education dynamic become more subject-orientated, in contrast with ISCED 1, where pedagogical learning is emphasized. At the end of ISCED 2, students are typically aged 14 to 16 years, and in many countries this coincides with the end of compulsory education. ISCED 2 is sometimes categorized into two groups, general and vocational, and includes other types of education such as adult education or special needs education. The type considered for this study is lower secondary general education (ISCED 2-24).

ISCED 3, or upper secondary education, is typically conceived as the second/final stage of general and vocational secondary education. Students enter this level between ages 14 and 16, and it is usually designed to be a preparation stage for tertiary education, for providing employment skills or both. Generally, ISCED 3 programmes are more varied and specialized and offer in-depth instruction in specific subjects or fields. They also can be general or vocational. For this study, only upper secondary general education (ISCED 3-34) is analysed.

UNESCO also makes some remarks about teachers' qualifications and organization for each level. In ISCED 2, teachers are often qualified in one or more specific subjects, as well

as in pedagogy, and more than one teacher is responsible for the same class, since each of them teach their respective field of specialization. This kind of organization is shared in ISCED 3, while it is not common in ISCED 1. In addition to pedagogical education, teachers are usually highly qualified in the subject matter they will teach.

Teacher education programmes analysed in this research belong to tertiary education in universities, Bachelor's and Master's (ISCED 6 or 7), though in the case of China there is some reference to short-cycle tertiary education (ISCED 5).

3.2. KEY CONCEPTS IN TEACHER EDUCATION

3.2.1. TEACHER EDUCATION FOUNDATIONS AND APPROACHES

To understand the current meaning of teacher education, it is necessary to start from its contemporary basis, intended as a result of the conceptual development outlined above. Without being the main topic of the dissertation, certain aspects are still considered as a significant key to understand the heart and progress of teacher education. As a result, this section includes the topics of foundation and approaches under a general perspective.

The foundations of teacher education systems are not only bound to the social and political notion of education, teaching, learning and teacher education as part of a wider educative system, but also to the role of teachers and students. In this section, teacher education addresses the eight core principles designed by Marcelo (1995).

1. Teacher education understood as a continuum: teacher education is divided into phases; however, ethics, didactical and pedagogical values should be maintained regardless of the teacher's education level. According to this principle, initial teacher education and teachers' lifelong learning are highly related.

2. Integration between teacher education and curricular development, academic and subject contents, innovation and pedagogical knowledge. (Teacher education should take into account all development processes affecting societies, schools and knowledge.)

3. It is necessary to connect teachers' initial education and schools' organizational development. Marcelo also gives strong weight to peer and organization supervision, basic in initial education and intended as a tool for improvement.

4. Strong correlation between initial teacher education academic, disciplinary and pedagogical knowledge. One of his key concepts is investigation-reflection learning as a method to make students conscious of the difficulties and underlying processes of their practices.

5. Integration between theory and practice, where schools have a main role in teachers' learning.

6. Isomorphism between teacher education and the kind of education they will be demanded to develop.

7. Individualism as part of the whole teacher education system. It is necessary to know the personal, cognitive, contextual and relational characteristics to carry out a learning process, therefore teacher education cannot be a homogenous activity.

8. Understanding of teaching learning as a social and dynamic process with scientific and technological implications.

Other generally admitted concerns about teacher education are related to student selection, programmes length, gap between education and real-life situations, balance between theory and practice, stages in teacher education, practicum design, lack of innovative practices, etc. However, all these core principles and components only make sense when they are understood inside a tangible model, where they can be analysed under certain criteria. As Castillo (2006) states (cited in Castillo, Ochoa, and Montes Castillo,2012), models are not applied in an integral or exact way, they cannot be outlined as exclusive models, and the limits among models are often vague, owing to a possible gap between theoretically well-defined characteristics and their implementation.

Davini (1995) identifies four models related to teacher education and future roles: the practical-artisanal, the academic, the technical and efficientist, and the hermeneutic-reflective model. The first conceives of teaching as an artisanal activity that can be learned in a workshop, through student adaptation to the main culture, teachers' roles and school context socialization. Teachers-to-be acquire professional knowledge from prior generations, reproducing accepted concepts, habits and roles.

The second, academic, model, stresses the importance of subject knowledge, placing pedagogy or didactical knowledge on a second level or suppressing it altogether; since it is thought that pedagogical skills can be learnt directly in the schools, it is not necessary to include them in initial teacher education programmes. This model sees teachers' autonomy as a risk and gives teachers the responsibility for transmitting content designed by others.

The third model, technical and efficientist, aims to introduce a rational basis, as a technical philosophy. Its core concepts are economy of effort, efficiency in the process and products. Teachers are seen as technicians whose work consists in explaining practical knowledge. Again, curricula are designed by experts in accordance with objectives of conduct and performance assessments. Teachers do not master scientific knowledge or logic, pedagogical or psychological techniques; they are transmission agents, subordinate to scientific experts and pedagogues.

The last model, the hermeneutic-reflective model, conceives of teaching as a complex activity in an unstable ecosystem, overdetermined by the context (space-temporal and socio-political) in which solutions to conflicts require specific choices in terms of ethics and policy. Teachers must face unpredictable practical situations that often require immediate action, and for which technical rules or school culture prescriptions are not sufficient per se. Teachers need to be creative, understanding and capable of linking emotional and theoretical investigation. Their growth is multifaceted, personal and collective. They learn from practical situations, constantly improving their competencies. These teachers need to have a global, enriched and dynamic education which meets the needs of the context.

Currently, despite the national models in which teacher education have been traditionally framed (but mainly in line with the comprehensive models or those based on innovation and knowledge broadcasting and not simply a repetition of traditional schemes), Marcelo and Vaillant (2009) recall that knowledge acquired by teachers in the initial education stage has an expiration date. It is unthinkable that initial education can give teachers enough skills for their entire working career. Instead, both the constant appearance of new professions and the rapid advancement of knowledge should encourage teachers to develop a positive attitude towards lifelong learning. This attitude is one of the specific components that can be developed during this first stage. Initial teacher education is intended to provide a set of tools and mechanisms to face career development in a coherent way.

Therefore, in this study teachers' initial education is understood as a first step to providing quality attributes for entering the profession, according to Marcelo's principles and encompassing multiple models (based mainly on the hermeneutic-reflective model as the most complex and comprehensive). The term *teacher* is at the same time understood as flexible, dynamic, creative, researcher, expert and novice, autonomous and co-dependent, individual and collective. Due to this complexity, initial teacher education is studied around five components: teacher education paths, curriculum design, professional competencies, qualifications and selection of teachers-to-be.

3.2.2. TEACHER EDUCATION INSTITUTIONS AND PATHS

UNESCO states, "The purpose of a teacher preparation programme should be to develop students' general education and personal culture; their ability to educate others; an awareness of the principles which underlie good human relations, within and across national boundaries; and a sense of responsibility to contribute, both by teaching and by example, to social, cultural and economic progress" (UNESCO/ILO Recommendation concerning the Status of Teachers, 1966, in UNESCO, 2006, p. 51). Still the organization of such programmes is rather heterogeneous across the world: not only are advantages and disadvantages found in all structural paths, but also teachers-to-be for different levels are sometimes educated in different programmes and institutions, which often leads to uneven qualifications.

Recent policies support the tendency of educating teachers in higher education institutions. UNESCO's *World Declaration on Higher Education for the Twenty-first Century* establishes as one of their missions to "contribute to the development and improvement of education at all levels, including through the training of teachers" and as a higher education goal it supports that "Clear policies should be established by all higher education institutions preparing teachers of early childhood education and for primary and secondary schools […]" (UNESCO, 1998, art. 10. b).

However, the institution is only the frame for multiple pathways and organizational routes for entrance into the teaching profession and attaining full licences. Generally, paths are divided into three models: concurrent, consecutive and combined or mixed-model. All of them offer pedagogical, theoretical and subject matter knowledge, along with practical on-the-job experience. The main differences lie in the organization of these four components.

Eurydice identifies concurrent models for teacher education with systems where professional components and general components are provided at the same time (Eurydice, 2009, p. 2). For secondary teachers, this means that their specific subjects and pedagogical and didactic knowledge are learnt simultaneously during the same degree. Typically, concurrent models are shorter and entry selection is based on secondary school results.

On the other hand, consecutive models correspond to a two-degree model. Eurydice states, "In the consecutive model, students who have undertaken tertiary education in a particular field then move on to professional training in a separate phase" (Eurydice, 2009, p. 2). Students obtain a first, subject-specialized degree, which content does not focus on teaching or pedagogical matters. This would be the case of mathematics, physics, biology, etc. In a second degree, the students acquire pedagogical and didactical knowledge, which allows them to enter the teaching profession. The last degree is usually shorter and aims to acquire a teaching qualification. This kind of path is usually longer and has a more restrictive entry, since selection is generally based on university results.

Eurydice (2002) defines subcategories inside the abovementioned paths: two concurrent models, one with on-the-job training and one without; four consecutive models, one with general education only, one with general and on-the-job training, one with general education and professional training but without the on-the-job phase, and the last with general education and professional training and a final on-the-job stage.

Besides these paths, some authors (OECD, 2009a; Musset, 2010; Manso and Valle, 2013) are starting to emphasize the existence of an increasingly frequent model where both consecutive and concurrent paths can coexist. Manso and Valle name it mixed-model, when it combines possibilities for both concurrent and consecutive learning within the same territory (Manso and Valle, 2013, p. 173).

According to Musset (2010), "Changing teacher education models can be a way to help resolve the problem of teacher shortage or to boost the quality of the teachers" (p. 6). Nevertheless, when comparing these three models, some differences are detected, showing the advantages and disadvantages of each. Musset, when analysing *Initial Teacher Education and Continuing Training Policies in a Comparative Perspective* (2010), as well as the OECD (2009a), noticed some characteristics inherent to each model.

Concurrent models, where subject matter and pedagogical and curricular learning take place at the same time, usually offer a more integrated learning experience and stronger professional identity. In contrast, consecutive paths offer a fragmented learning process, which leads to weaker learning techniques and pedagogical field knowledge, as well as a weaker professional identity, which has been constructed around the subject in which they specialized but not around teaching.

Another characteristic differentiating the models regards the entrance process. Concurrent paths are rather rigid regarding the selection process for entering the teaching profession, hampering access for those who studied a field other than education. In contrast, consecutive models are flexible, and allow teachers to have strong subject expertise.

In a mixed-model organization, the advantages and disadvantages explained above coexist in the same system, along with other characteristics. Offering different programmes and models can attract different profiles of potential teachers, but efficiency could be undermined by the extra financial cost.

Globally, according to the OECD (2014a), Musset (2010) and Eurydice (2009), both models exist in most countries, however it is common for primary school teachers to be educated in concurrent models (Spain, Finland, Turkey, South Korea, Mexico, Japan), and lower and upper secondary education teachers to be prepared through a consecutive model (Germany, Spain, France, Italy, Ireland, England).

For primary teachers, France would be an exception, educating teachers for all levels through a consecutive model. On the other hand, exceptions in secondary education would be Greece, Japan or Poland, where teacher education programmes for lower and upper secondary teachers are organized in a concurrent path. Some countries have a mixed model to prepare teachers for a specific or every level, such as Portugal, Chile, the USA and Sweden, which offer a mixed-model for all teaching levels, or Norway and Austria, where a mixed model is established for both lower and upper secondary school teachers, but not for primary school teachers.

The path also affects the length of the initial teacher education programmes until the student obtains a teaching degree. According to the OECD (2014a), the average length for lower and upper secondary teachers is similar in 25 out of 36 examined countries. Lower secondary teacher education ranges from 3 years (Austria and Belgium) to 6 or 6.5 years

(Germany, Italy and Luxembourg). In general, initial teacher education for upper secondary teachers ranges from 4 years (in 10 countries) to 6.5 years (Germany and Luxembourg). For 8 countries, upper secondary teacher education is between half a year and two years longer that their own education programmes for junior secondary teachers. In this thesis, qualification matters are further tackled in Section 3.2.5.

When considering the internal structure of teachers' initial education models and how their credits or classes organization relate to the distribution of pedagogical and academic knowledge, trends can again be classified into two categories: integrated or modularized (Buchberger, 1996). In integrated models, both components are combined simultaneously, giving practical and theoretical experience. Usually this classification refers to concurrent models, where the length of the degrees allows a higher flexibility and freedom, but it can also be found in consecutive paths. On the other hand, modularized models noticeably distinguish between pedagogical/didactic and academic/discipline subjects. Owing to the kind of structure, this scheme is often offered in consecutive plans, but not exclusively. One of the most interesting features of this trend is the autonomy and freedom with which students can combine and choose when and what subjects to take during their studies, which highly varies among countries and programmes.

Still, the meaning of the paths and the distribution of the programmes is only understandable when related to a detailed plan circumscribed and developed in a determined model. The next point tackles the specific mechanisms used to describe initial teacher education programmes by each institution: teacher education curriculum design.

3.2.3. TEACHER EDUCATION CURRICULUM DESIGN AND ORGANIZATION

Aiming to better understand the notion of curriculum used in the thesis, this section tackles its definition, types, orientations, contents and structure, new perspectives and organization.

The term curriculum, in education, mainly relates to educative intentions, as "plans for learning" (Taba, 1962), "any programme or plan of activities" (Collins English Dictionary, 2003) or an "academic plan" (Lattuca and Stark, 2009), and linked with academic contents or subjects inside a plan, as "a course of study in one subject at a school or college; a list of all the courses of study offered by a school or college" (Collins English Dictionary, 2003) or

"the lessons and academic content taught in a school or in a specific course or program" (The Glossary of Education Reform, 2014).

Some authors and educators have found comprehensive and beautiful ways to describe this concept, such as Couto, quoted by Barbosa Moreira, who writes that a curriculum is "the totality of child experience at school, directed for the purposes of education. It is the entire life program for each and every student" (Couto, 1966 cited in Barbosa Moreira, 2008, p. 178). Franklin Bobbitt (1918) emphasized that curriculum is "Latin for race-course, or the race itself, a place of deeds" and added, "Applied to education, it is that series of things which children and youth must do and experience by which of developing abilities to do the things well that make up the affairs of adult life" (Bobbit, 1918, p. 42).

This conceptual notion can set the outlines for education plans matching the context and needs of specific groups and circumstances. Political, social and cultural values and new tendencies are often reflected in national curricula. Palamidessi and Feldman (2008) state, "The curriculum is a cultural construction, and its meanings depend on the way in which a political-educative tradition is built. The different conceptions are a product of diverse ways of understanding the relations among schools, state, and society" (Palamidessi and Feldman, 2008, p. 109).

Conversely, different dynamics between bureaucracy and reality split the notion of curriculum into different *types*. Pollard and Triggs (1997) detect four conceptions: official curriculum, hidden curriculum, observed curriculum and curriculum-as-experienced.

The official curriculum is the explicit programme of learning. With a structured sequence and progression generally designed by educative authorities, this curriculum is easy to detect and analyse. The hidden curriculum refers to all the learning produced during academic activities, but it does not belong to the official curriculum, it is not formally established and therefore difficult to detect and analyse. The observed curriculum is what can be seen as taking place in the classroom, and curriculum-as-experienced comprises those parts of curriculum that connect meaningfully with students. This research is developed centred on the official curriculum, since, out the four, it allows easiest access to objective data for a comparative study.

Curricula have been traditionally classified according to many *orientations*. Generally, the main theories refer to academic classical humanist (subject-based and content-driven),

utilitarian technocratic vocational (objective-driven) and progressive developmental pedagogy (process-driven); in addition most include a social/cultural reference.

Certain categorizations are subject-centred, grouping curricula into child-centred, society-centred, knowledge-centred or eclectic (Longstreet and Shane, 1993) or individual, society, and subject matter (Flowers, 2007); or as in Posner's theory (1998) into procedural approach (steps to follow), descriptive approach (actions of curriculum planners), conceptual approach (curriculum planning elements), and critical approach (social structures). Elliot Eisner (1970) identifies five common curriculum orientations: development of cognitive processes, academic rationalism, personal relevance, social adaptation and social reconstruction, and curriculum as technology. A similar classification was made by McNeil (1977) with four curriculum orientations: academic, technological, humanist and social-reconstructionism.

The literature shows that four of these categories have , since the late 20th century, been frequently repeated by experts: academic rationalism, cognitive processes, self-actualization and social-reconstructionist. Generally, these components comprehend the basis of current curricular orientations (University of Western Australia, n.d.).

According to *Curriculum Orientations* (University of Western Australia, n.d.), academic rationalism is the oldest way to orientate a curriculum. It is centred on knowledge and contents, and aims to educate effective adult members of society. It is essentially linked to transmission. Students learn how to acquire and justify facts, how to carry out research through exposition and inquiry methods. The emphasis is placed on what to learn, rather than on how to learn, and the learning process does not vary according to student characteristics. On the other hand, the purpose of cognitive processes is to develop cognitive skills, and it is conceived as a critical philosophy towards academic rationalism. It is principally linked to the product. The main problems detected in the academic rationalism orientation are: excessive content, neglected learning process and outdated content. As a result, this philosophy focuses on intellectual capacities and cognitive abilities.

However, a strong society demanding a subject-centred philosophy and assessments, while developing students' emotional capacities leads to the third curriculum orientation. Self-actualization's purpose is to develop the whole person within a human society, integrating thinking, feeling and action. Subject matters are emotionally and intellectually linked to students' lives, interests and needs. A curriculum offers a frame to develop a

supportive environment and learning facilitations; it does not teach attitudes or feeling but provides choices opportunities and responsibility for their choices.

Concurrently, a society-centred paradigm developed. Social-reconstructionists argue that education cannot have universal objectives and content, but has the common objective of confronting students with humanity's problems (environmental issues, political corruption, world peace, racial prejudice) in an effort to produce a better society. Learning opportunities must be real and teach values. The social-reconstructionist curriculum is essentially linked to praxis. Schools are conceived as agents for social change and teachers' role is to help their students to discover their own interests, to relate local, national and world purposes to students' goals, stressing cooperation with the local community and its resources.

This last orientation is the one assumed in the thesis, according to the modern lifelong learning paradigm, globalization, the use of technologies, and economic or educative exchanges as universal objectives, while maintaining national objectives, culture and needs, hence, the section dedicated to cultural knowledge.

The aim of this section is also to deal with the desirable *contents and structure* of a teacher education curriculum. When analysing diverse authors' approaches, similar underlying categories are found. For instance, Tyler (1949) proposes four questions as a basis of any curriculum design: (1) what educational purposes should the schools seek to attain? (2) How can learning experiences be selected for them to be useful in attaining these objectives? (3) How can learning experiences be organized for effective instruction? (4) How can the effectiveness of learning experiences be evaluated? Instead of these four categories, Lattuca and Stark (2009) propose that it should include seven topics: the purpose, content, sequence, methods, instructional resources, evaluation approaches and how adjustments to the plan will be made based on experience or assessment data. Moreover, Braslavsky (2003) detects that most experts define a curriculum in terms of six main features: why, what, when, where, how and with whom to learn.

Nowadays most experts and international organizations try to provide an answer to these questions, while focusing on specific contents according to the intrinsic flexibility of education, and aiming to reach a quality teaching plan. The *International Handbook of Curriculum Research*, published in 2008, collects curricular analysis from all over the world. From it, certain countries' priorities or difficulties could be highlighted. Generally, curricula include study plans and programmes as products of formal curriculum structures, learning and

teaching processes, the preparation of professionals and the social function of teachers, social and educative practice, problems generated by the selection, organization, and distribution of curriculum contents, and subjective interpretation of the subjects implied in curriculum. Issues to be considered for contemporary societies when designing a curriculum include the student workload, the importance of English as a second language, the organization of textbooks, issues concerning the disciplines to be taught, and the importance of computer literacy (Vicentini, 2008).

The literature proves, since many aspects interfere in education and its outcomes, that it is fairly difficult to delimit teacher's education curriculum core ideas. Indiana University (n.d.) detects six basic principles: conceptual understanding of core knowledge, reflective practice, teaching for understanding, passion for learning, understanding school in context of society and culture, and professionalism. In this matter, Schleicher (2012) mentioning Charles Fadel's proposal, includes: knowledge, skills, character and meta-layer.[16] But, according to Caena (2011a), the five fundamental features of effective teacher learning and development are content focus, active learning, coherence, duration and collective participation.

Due to the strong relationship between the curriculum and society values, technology development, globalization, etc., *new perspectives* and broader frames are taking place to design a coherent basis for teacher education, meaning targeting dynamic elements and proposing dynamic and flexible curricula. Because of this variability, most documents are currently driven by terms such as 'standards' or 'competencies' rather than specific goals. Improvement could be analysed upon general notions: learning standards, assessment requirements and standardized testing, cultural-pedagogical philosophies, didactic methodologies, application of available resources (material, contextual and personal), possibilities of alternative paths, or general national/international standards.

The cited notions could guide the development of a curriculum design and process, which according to Pratt "must develop priorities to guide the selection of tasks to be performed, as well as be able to perform them" (Pratt, 1980, p. 10). Braslavsky (2003) defines curricular development as an "intangible" element, and associates it with decision-makers

[16] Charles Fadel's term meta-layer refers to multidisciplinary and comprehensive elements such as learning how to learn, interdisciplinary studies, systems thinking, personalization, etc.

about learning experiences at different levels, national, provincial, local, school and international, with many agents involved, as politicians, experts and teachers.

Therefore, the core question to answer is how to integrate so many agents and levels within a single programme. In this instance, another concept relating to curriculum takes front place: *curriculum organization*. Classification of phases and types of subjects have historically been critical for designing a curriculum; hence curriculum classification has been indispensable for developing this research.

The OECD (2002) divides the general curriculum into two categories: compulsory and non-compulsory. Compulsory curriculum refers to required and essential instruction time, and non-compulsory curriculum is associated with elective and optional subjects whose time is not included in the compulsory curriculum. For analytical purposes, the compulsory curriculum is also distributed into two classes: compulsory core curriculum and compulsory flexible curriculum. The compulsory core curriculum is the minimum time dedicated to core subjects and study areas, and compulsory flexible curriculum refers to flexible or optional classes which are part of the compulsory curriculum.

Subjects can also, however, be classified according to the field of knowledge, mainly divided into disciplinary and pedagogical knowledge. At present, the main groups and studies usually refer to pedagogy and general didactics, specific subject knowledge, subject didactics and teaching practices. The balance between theory and practice is also a central orientation when designing curricula, as well as transversal knowledge. Modern philosophies back the thesis that new curricula should revolve around competencies, which offer the possibility to increase autonomy and flexibility. Schwille and Dembélé (2007) found that "initial teacher education across the world is usually a mix of theoretical and practical learning; although it seems that the theoretical has become dominant in many institutions" (p. 60).

UNESCO states, "Fundamentally, a teacher-preparation programme should include: general studies; study of the main elements of philosophy, psychology and sociology as applied to education; the theory and history of education, comparative education, experimental pedagogy, school administration and teaching methods of various subjects; studies related to the intended field of teaching; and practice in teaching and conducting extra-curricular activities under the guidance of a fully qualified teacher" (UNESCO/ILO Recommendation concerning the Status of Teachers, 1966, in UNESCO, 2006, p. 51).

The imbalance between theory and practice for secondary teachers is remarkably strong due to several factors; for instance, the scarce attention paid by international and national organizations to secondary teachers' education (historically these organizations have been more concerned about primary education) or the inherent nature of secondary education itself, where transmission of knowledge has traditionally been a priority. For initial secondary teachers' education, Bolívar Botía (2006a) underlines a comment made by Esteve in 1997 affirming that the lack of political will to establish a coherent pedagogical education has provoked the contemporary crisis in secondary teachers' professional identity. Bolívar also states that the lack of pedagogical training has mortgaged the future of secondary teachers, and that professional identity should be part of every teaching programme.

Considering the above, when planning a secondary teacher curriculum design, besides the main ordinary contents, four elements need to be considered: the education approach/model, the path, the historical imbalance between theory and practice which needs to be well-adjusted, and the need for secondary teachers to update their knowledge in both their specific subject and pedagogy.

Due to the nature of this research, the study focused on the official curriculum (*type*) under a society-centred paradigm (*orientation* - with a section focusing on general features and another on cultural characteristics to better understand the culture of each country). The curriculum is studied in terms of *contents, structure* and chronology, subject distribution, and balance between theory and practices (*organization*). According to the *new perspectives,* and aiming to reach a global understanding of the role of teachers and their preparation, the next section develops the profile of competencies required for teachers.

3.2.4. TEACHERS' PROFESSIONAL COMPETENCIES

The multidisciplinary, innovative and vague character inherent to the term 'competencies', as well as the current difficulty for teachers to translate the concept into specific actions, entails that this recent approach, where competencies appear to be the key guiding teaching plans and actions, is often conceived and understood in different ways in each country and sometimes even in each context. Weinert already opined in 2001, "There is no basis for a theoretically grounded definition or classification from the seemingly endless inventory of the ways the term competency is used" and adds, "Many different theoretical approaches exist and meanings vary depending on perspective and underlying objectives

associated with the use of the term both in scientific discussion and in the policy discourse" (Weinert, 2001, p. 6).

In spite of the lack of consensus about this definition, competencies have taken a primordial role in contemporary societies as a component of basic knowledge. The OECD argues that, "Sustainable development and social cohesion depend critically on the competencies of all of our population – with competencies understood to cover knowledge, skills, attitudes and values" (OECD, 2005b, p. 4). Several comparable approaches to this multifaceted construct come out because of its relevance. Various organizations and authors have attempted to delimit the term, framing it in their field of expertise.

The DeSeCo Project (1997) – Programme Definition and Selection of Competencies: Theoretical and Conceptual Foundations – was launched by the OECD with the aim "of providing a sound conceptual framework to inform the identification of key competencies, to strengthen international assessments, and to help to define overarching goals for education systems and lifelong learning" (OECD, 2005b, p. 5). DeSeCo maintains that "A competency is more than just knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilising psychosocial resources (including skills and attitudes) in a particular context" (OECD, 2005b, p. 4).

DeSeCo (OECD, 2001) also warns about the relation between desirable competencies and ethical, scientific and political issues. Therefore, understanding competencies in certain environments not only means knowing about the underlying vision of the world, cultural assumptions, moral values and analytical tools used to identify these competencies, but also about the interdependence between scientific findings, education bodies and policies, national philosophy, educative procedures and practices.

Along the same lines, the European Commission (2012b) establishes that "teaching staff will increasingly need the competences to find, evaluate and deploy learning materials from a wider range of sources, and to help learners acquire these competences" (p. 22). Cultures, professions and policies are strictly connected to the rapid development of societies, hence competencies can only be understood if framed within a professional field, to which they give support with specific skills and a specific academic profile.

In education, for example, Garduño (2004) reports that teaching competencies can be defined as the practical way in which a set of knowledge, beliefs, skills, abilities, attitudes,

values and strategies a teacher possesses determines the approach and the results of his educational psychology interventions; Frade (2009) makes an attempt to define competencies, stating that, "Competencies should be considered as part of the cognitive behavioral and the adaptive capacity inherent to the human beings, which are deployed to meet the specific needs faced by people in socio-historical and cultural frameworks, it involves an adequacy process between the subject, the context's demands and needs, in order to be able to provide answers and/or solutions to these demands"(Frade, 2009, p. 81); and Koster and Dengerink, (2008 cited in Caena, 2011a), define them as the combination of knowledge, skills, attitudes, values and personal characteristics empowering the teacher to act professionally and appropriately in a situation, deploying them in a coherent way.

Certain authors have categorized competencies in groups, breaking down the concept by subcomponents. These include Echeverría (2001), who identifies four basic competencies: technical (to know), methodological (to know how to do), participative (to know how to be), and personal (to be). Ayala (2008 in Tejada Fernández, 2009) proposes five specific types of competencies for teachers: communicative, organizational, educational leadership, scientific, and assessment and control.

Teachers' competencies have also been classified by Perrenoud (2004a), who identified ten: organize and direct learning situations, manage the progression of learning, develop and evolve the devices of differentiation, engage students in their learning and in their work, work in teams, participate in school administration, inform and involve parents, use new technologies, face the duties and ethical dilemmas of the profession, and manage the training itself. Other authors such as Scriven (1998), cited by Cano (2005), have established eight: teaching responsibility, planning and organizing, communication, organization of the class, effectiveness in instruction, assessment, professionalism, and other services to the centre and community.

Independently of how competencies are classified, when referring to education, mainly secondary teachers' education, its main objective is to provide teachers with the tools to deal with their everyday classrooms. To acquire teaching competencies implies not only knowing the official curriculum and institutions' systems or specific and general didactics, but to manage their own capacities and deficiencies. Therefore, a competency related to professional personality is worth mentioning.

The importance of attending teachers' personal traits is also underlined by the OECD when assuming that "teachers' beliefs, practices and attitudes are important for understanding and improving educational processes" (OECD, 2009b, p. 89); by Liakopoulou (2011) who stresses that modern studies revealed two essential components in teachers' performance: personality traits and acquired knowledge; or by McBer's (2000) proposed model, where three interrelated aspects define effective teaching: professional characteristic, teaching skills and classroom climate. Whether competencies related to personal characteristics and the teaching profession can be learned or taught depends on teachers' continued education, personal interests, beliefs and attitudes.

Historically, detailed classifications of teachers' personal characteristics have often been left aside when designing future projects and studies. Unruh and McCord (2010) detect not only the difficulty on deciding which specific traits are relevant for professional candidates in education, but also the fact that most institutions design basic dispositions in teacher education students using common sense and social desirability. Pigge and Marso, in Bedel 2008, relate pre-service teachers' negative attitudes towards teaching with in-service burnout, and positive attitudes with classroom behaviours and a more adaptive transition from pre-service to in-service teacher (Bedel, 2008).

Liakopoulou (2011), referring to studies carried on by Malikow (2005) and Harslett et al. (2000), affirms that some traits relating to the profession such as flexibility in terms of the appearance of students, sense of humour, sense of fairness, patience, enthusiasm, creativity and care for or interest in the students, contribute to the effectiveness of teachers.

The criteria for defining the term 'competencies' are notably wide, but the literature analysis leads us to the definition used in this research. Teachers' competencies have the objective of covering teachers' academic and personals needs and demands to obtain quality results in school-specific subjects and personal interaction and growth from their students. These competencies are imbued with socio-historical, political, cultural, scientific and ethical influences, and affect all professional and personal elements. Developing teacher competencies during initial education is a strategic factor to strengthen the teacher-to-be's identity and professionalism.

3.2.5. TEACHER EDUCATION QUALIFICATIONS

The *Collins English Dictionary* defines a qualification as "an official record of achievement awarded on the successful completion of a course of training or passing of an exam", and in a second definition adds, "an ability, quality, or attribute, esp. one that fits a person to perform a particular job or task" (Collins English Dictionary, 2003). The ISCED system defines an educational qualification as an "official confirmation, usually in the form of a document certifying the successful completion of an education programme or a stage of a programme" (UNESCO Institute for Statistics, 2011, p. 8).

A similar concept often used in this context is certification. At the end of the programme, students get a qualification/certification, which is according to UNESCO and UNEOV's TVETipedia Glossary, "Awarded to a person on successful completion of a course in recognition of having achieved particular awareness, knowledge, skills or attitude competencies", or "Certification awarded to a person on successful completion of a course in recognition of having achieved particular knowledge, skills or competencies". The process by which an agency or an association acknowledges the achievement of established quality standards and usually grants certain privileges to the target individual (student or teacher).

However, this research differentiates between the term *qualification* as an official document obtained after a certain degree in education, and certification as the special licences granted in certain countries to certain candidates, often to cover teacher shortages. Certifications are frequently obtained by alternative routes, can be temporary and sometimes do not require a specific degree or education. Other types of teaching certification are granted after obtaining a teaching degree and after passing an examination as a 'work permit' in certain regions or administrations of a country. Another notion of certification refers to an official document demonstrating a certain level of knowledge, mainly for students who did not complete the whole level. This thesis does not focus on certifications, but on qualifications.

Teachers' qualifications, as a result of teacher education programmes, should give teachers-to-be the knowledge and quality to work as a teacher, demonstrated by an official record. Hence, to reach the condition of teacher, many countries have established a qualifications framework. It is undeniable that a qualifications framework is related to the definition of qualification. The OECD stated in 2006, "A qualifications framework is an instrument for the development and classification of qualifications according to a set of

criteria for levels of learning achieved. This set of criteria may be implicit in the qualifications descriptors themselves or made explicit in the form of a set of level descriptors. The scope of frameworks may be comprehensive of all learning achievement and pathways or may be confined to a particular sector for example initial education, adult education and training or an occupational area" (OECD, 2006, p. 6).

The need for a qualifications framework is justified by the OECD in the same document, aiming to better match qualifications with knowledge, skills and competencies and to better relate qualifications to occupational needs, to bring coherence to subsystems of qualifications, to support lifelong learning and to facilitate the involvement of political actors and stakeholders.

Initially some early investigations established that the link between teachers' qualification and students' results was weak or non-existent. These studies found little positive correlation between students' performance and teacher characteristics such as education, experience or salary (Hanushek, 1986, 1994). However further and modern studies (Goldhaber and Brewer, 1997; Darling-Hammond, 2000; OECD, 2005a; Barber and Mourshed, 2007; Ingersoll, 2007; UNESCO, 2009) have contradicted Hanushek's findings.

Gannicott (2009) and Goldhaber and Brewer (1996) explain Hanushek's results in terms of the nature of statistical investigation: since the research was conducted in places like the USA, where most teachers hold a college degree, there is not enough variation to discern the impact of small differences in their education. Another argument is that the pool data was poor: some authors contend that in Hanushek's studies, "variables representing school and teacher 'quality' are typically very crude. For instance, degree level alone does not distinguish among colleges of differing quality, nor when the degree was granted, nor does it convey any information about college major, certification requirements fulfilled, or subsequent professional development" (Goldhaber and Brewer, 1996, p. 200). To avoid a similar bias, this dissertation covers majors, qualification requirements and contents.

Qualification relevance is also supported by Darling-Hammond (2000), who reports that "measures of teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics, both before and after controlling for student poverty and language status" (Darling-Hammond, 2000, p. 1). She also recalls that many authors, such as Knoblock (1986) or Sanders, Skonie-Hardin, and Phelps (1994), "[…] found that students achieve at higher levels and are less likely to drop out when they are

taught by teachers with certification in their teaching field, by those with Master's degrees, and by those enrolled in graduate studies" (Darling-Hammond, 2000, p. 6). Goldhaber and Brewer (1997) obtained similar findings when researching mathematics and science teachers. They relate qualified teachers in mathematics and science, or who have earned a Bachelor's or Master's degree in that subject, with higher test scores than students with teachers without a subject-specific qualification.

Goldhaber and Brewer (1996) also disentangle other subject results (such as English or history) from mathematics or science degrees, which makes these experts think that a subject-specific qualification rather than teachers' ability is what leads students to improve.

In the same regard, Education International (2007) remarks that society needs quality education, and thus highly qualified teachers, to ensure social and economic development. It encourages governments to "give priority to adequate salary, which must provide teachers with a reasonable standard of living", arguing that this would also enhance "their professional qualifications by developing their knowledge and improving their cultural resources".

The Centre for Education Policy and Leadership (CEPAL), in 2003 conducted research through the University of Maryland about teachers' qualification and achievements. While primary teachers' specific subject qualification is not common and could even show negative effects on student learning, this study demonstrated that secondary teachers' subject-specific degrees have a high impact on student outcomes. This study included a collective dimension regarding teacher qualification and its effects on students' achievements. Since students, especially in secondary schools, deal with different teachers, their learning is not only related to one teacher and their subject, but to the teaching staff as a group. Having a highly qualified group of teachers provides more opportunities for high student outcomes.

Traditionally, different educative levels require different types of qualification. UNESCO (2006) analysed 2002 UNESCO research which studied 106 countries, including a parameter based on teacher qualifications. It detected primary teachers having a minimum standard of upper secondary qualification (ISCED 3). These programmes were usually specialized qualifications, not designed to lead to university studies.

Data for the low secondary stage were only available in 74 countries and show that teachers needed a higher qualification, mostly post-secondary non-tertiary diplomas (ISCED 4), or tertiary-level degrees and diplomas (ISCED 5). Again, at a higher education level, the

available statistical reports decrease. For teachers in upper secondary education, only 54 countries provided data related to qualification. Most of the countries require a tertiary-level diploma to teach at that stage.

Contemporary research underlines the evidence that some countries require extra examinations to obtain teaching qualifications, and confirms that teacher qualification is progressively taking place in higher institutions, like universities or colleges. An OECD study found that "To improve teacher quality policy makers can also allow to raise teacher certification requirements, as for accreditation for teacher education programmes. In half of the OECD countries, to have followed a teacher education programme is no sufficient to get a certification to teach" (Musset, 2010, p. 46).

The same tendencies were obtained by Ingersoll (2007), when analysing the required qualifications for elementary and secondary teachers in six nations, five Asian (China, Japan, South Korea, Singapore, Thailand), the USA and one Chinese autonomous region (Hong Kong). The data shows how all but Hong Kong prepared their secondary teachers at the Bachelor's degree level, and all but Hong Kong and Singapore have global final examinations, either to obtain the qualification or upon employment.

Along these lines, the European Commission established in 2005 some common principles for teacher competencies and qualifications, later detailed in Section 4.2.4. These principles conceive of teaching as a well-qualified profession linked to high-quality systems of countries where "all teachers are graduates from higher education institutions and those working in the field of initial vocational education should be highly qualified in their professional area and have a suitable pedagogical qualification" (European Commission, 2005, p. 2).

Considering the above, it seems essential to keep conceiving this trend, where secondary teachers have been commonly educated in higher institutions, as a model of good practice. The thesis, hence, analyses the national qualification framework, the level of qualifications and the existence of alternative paths or additional examinations to obtain a teaching qualification.

3.2.6. SELECTION OF TEACHERS-TO-BE FOR INITIAL EDUCATION PROGRAMMES

As justified in *Education at a Glance* (OECD, 2014a), "Initial teacher training, together with other factors, such as the image and status of teaching in society, working conditions in the school, and the requirements for entry into pre-service training, influence the supply of prospective teachers, both in quantity and quality. In addition, the nature of entry requirements determines whether or not the teaching profession is open to attracting qualified candidates from diverse backgrounds" (p. 498).

According to the report *Global Teacher Status Index* (Varkey Gems Foundation, 2013), studies have convincingly related schools' and students' performance to three variables: the academic qualifications of teachers, teachers' pay and the competitiveness of entry into teacher education. Better qualifications of teachers and more applicants per education place show a positive correlation with better results achieved by an education system for its young people. Since qualifications have already been treated in the last part, this section focuses on the recruitment of students for teacher education programmes.

In this regard, UNESCO (2013a) establishes that "The selection and recruitment of the best graduates and the preparation of good teachers remain a central policy concern. Countries need, therefore, to develop comprehensive policies to improve the quality of the teaching force as well as their status, remuneration and working conditions" (UNESCO-IBE, 2013, p. 3).

The selection process varies for different paths. Future primary teachers, as previously explained, are usually educated in concurrent models and therefore their selection process generally occurs when they finish secondary education, in normal-basis recruitment for higher education institutions. In the case of secondary teachers, where commonly a consecutive path is applied, selection refers to entry into a tertiary education level, such as a Master's degree. The OECD (2009a) detects that concurrent models for teacher initial education base their selection criteria on secondary final or global results, while consecutive paths depend on university or higher education institution degree results.

Education at a Glance (OECD, 2014a) stresses that places on teacher education programmes have policies of limitations in approximately half of the countries with available data in the OECD. Nineteen out of the 32 countries select their lower secondary teaching

candidates based on their secondary school grade-point average. Interviews, competitive examinations, standardized tests or a combination of these criteria are the most common dynamics for assessing aspirants. For upper secondary teachers, 12 out of 36 used similar selective criteria.

The OECD (2009a) makes another key finding related to student selection for education degrees: competition to enter teachers' majors is stronger in countries where teaching has a high status, whilst in other countries, teaching majors are the last option when the labour market deteriorated. Historically, in some nations, there were no entry criteria for teacher education or higher education programmes. Usually, in these countries, changes to these policies are not well-accepted, and nowadays it is difficult to establish strong entry criteria.

Another piece of the OECD's (Schleicher, 2011; OECD, 2011) advice is to design more flexible approaches to teacher education, such as offering alternative pathways into teaching to ease the entry of underrepresented groups. Suggestions include, among others, providing part-time study or distance learning, as well as giving credit for significant qualifications and experience.

It seems that attracting high-profile students to education programmes leads to positive school results. Several OECD (2005a, 2009a, 2014a; Schleicher, 2011) reports point out the need to improve selection into teacher education. The proposed methods for this, (later detailed and categorized in section 5.3 to analyse international proposals) are (OECD, 2005a, p. 11-12):

- To provide more information and counselling to prospective teacher trainees so that they make better informed enrolment decisions.

- To establish procedures to assess whether individuals wanting to become teachers have the necessary motivation, skills, knowledge and personal qualities.

- To provide incentive schemes to recruit candidates with high-level competencies.

- To offer flexible programme structures that provide students with school experience early in the course.

- To offer opportunities to move into other courses if trainee teachers' motivation towards teaching changes.

- In countries facing teacher shortages, to make teaching a more attractive career choice and use selection criteria that ensure that the best possible candidates enter teacher education.

Caena (2014), in research carried out for the European Commission, supports some of this advice. The author compiled key strategies for selecting teacher candidates for initial teacher education, based on Goe (2007), Vaillant and Manso (2013) and various European Commission documents. She linked teacher-to-be selection with significant programme aims, processes and roles, the need to include academic excellence in subject knowledge, knowledge about pedagogical practices, contents, professional skills and attitudes as well as environments.

In light of these documents, designing an effective process to select student teachers, as well as raising the attractiveness of the profession, have become some of the core elements of establishing a teacher education system. The selection process is included in this research, addressing the main processes of selection in each country, while taking into account the need to understand some important and influential elements towards professional attractiveness: professionalization, status and professional identity.

3.3. TEACHER'S PROFESSIONALIZATION, STATUS AND PROFESSIONAL IDENTITY

During their initial education state, future teachers should receive, apart from knowledge (subject or pedagogical), the feeling of becoming part of a professional group. Like every profession, teaching comprehends a multidisciplinary set of beliefs, morals, predispositions, responsibilities and passions which make the difference between neophytes and professional teachers. As an example of the complex context in which a teacher acts, Day et al. (2006), cited in Canrinus 2011, "found that teachers balance three relevant dimensions in their work: a personal dimension (their life outside school), a professional dimension (social and policy expectations of what constitutes a good teacher and a teacher's own educational ideals) and a situational dimension (the teacher's immediate working environment)" (p. 7).

While initial teacher education cannot cover the endless possibilities a teacher will confront during their future professional life, it is the aim of this level of education to provide the essential tools to deal with possible and conceivable situations. The relevance of understanding the components and dynamics of teaching is justified by the fact that "The

teaching profession suffers from a vicious circle of low status, lack of competitive resources, inability to control their own selection, training and qualification, divided and consequently ineffective organisation and a degree of State interference and control suffered by almost no other profession all leading to low bargaining power, low remuneration and low status" (Perkin, 1985, cited in Warrior, 2002, p. 60).

In this part of the dissertation, some basic terms which are consider to affect future teachers are explained: professionalization as the basis of a sense of belonging, status as the adjustable social image in which teachers and education can interfere, and identity as the adjustable self-image which student teachers can find and improve themselves.

3.3.1. PROFESSIONALIZATION: TEACHING AS A RECOGNIZED PROFESSION

The terms *profession*, *professional*, *professionalism* and *professionalization* are often used interchangeably, even when they entail different connotations. The first two, profession and professional, are easily distinguishable. A *profession* is a distinct and generic category of occupational work. In *Collins English Dictionary* (2003), it is "an occupation requiring special training in the liberal arts or sciences, esp. one of the three learned professions, law, theology, or medicine", and a similar definition can be found in the *American Heritage Dictionary of the English Language* (2011), where a profession is "An occupation, such as law, medicine, or engineering, that requires considerable training and specialized study".

A *professional* is therefore, "a person who belongs to or engages in one of the professions; a person who engages for his livelihood in some activity also pursued by amateurs; a person who engages in an activity with great competence" (Collins English Dictionary, 2003) or "A person following a profession, especially a learned profession; One who earns a living in a given or implied occupation: hired a professional to decorate the house; A skilled practitioner; an expert" (American Heritage Dictionary of the English Language, 2011).

As shown, definitions of profession and professional career are historically related to education and qualifications, mainly of doctors, lawyers or engineers which were, and still are, considered high-profile professions. Being a professional required a specialized education, ethical commitment and dedication, and professionals undertook or performed their work, being paid for their knowledge.

However, some criticisms related to lack of knowledge, control, autonomy and prestige parameters have been made of the conception of teaching as a profession (Ornstein and

Levine, 1997, cited in Kubow and Fossum, 2003). Certain criticisms are inherent to the nature of teaching, such as the points made by Ryan and Cooper (1998, cited in Kubow and Fossum, 2003), about US teachers. The authors stress the fact that children have many teachers and learn from many sources, inside and outside schools. They also consider the limitations of teachers' autonomy, since decisions are taken on national or local boards of education often by individuals who are not teachers, the scarce teacher participations in professional organizations, and their lower salaries compared with other teachers in developed countries.

Professions which belong to social frameworks cannot express strict parameters, since the basis of the services are constructed upon the multifaceted circumstances of human beings, and therefore require a high level of flexibility. However, Greenwood (1957), presents five basic attributes for every profession, which could also fit teachers: (1) presence of systematic theory (formal education), (2) authority (autonomy and control over the professional service), (3) community sanction (qualifications), (4) adherence to ethical codes and grounds, (5) culture with a professional orientation (besides qualifications, professionals get monetary rewards, degrees, etc. which also appertain to professional development).

Other classical parameters to distinguish professions and professionals from occupations and amateurs, which are nowadays present in teachers' contexts, are: the establishment of a higher institution degree, teachers' associations, state licensing laws, professional deontological codes and the fact that teaching is ordinarily a full-time occupation.

As early as 1966, UNESCO stated that "Teaching should be regarded as a profession: it is a form of public service which requires of teachers expert knowledge and specialized skills, acquired and maintained through rigorous and continuing study; it also calls for a sense of personal and corporate responsibility for the education and welfare of the pupils in their charge" (Article III, p. 4). Following these descriptions, the notion of professionalism implies a concept rooted in professional qualifications, as well as in society evaluation.

The *American Heritage Dictionary of the English Language* (2011) refers to *professionalism* as "Professional status, methods, character, or standards", Ologies and Isms (2008) as "the standards, views, and behavior of one who engages in an activity, especially sports or the arts, to make his livelihood". Hoyle defines professionalism as "those strategies and rhetoric employed by members of an occupation in seeking to improve status, salary and conditions" (Hoyle, 1975, p. 315), and Holroyd (2000) emphasizes that "professionalism is not some

social-scientific absolute, but a historically changing and socially constructed concept-in-use" (p. 39).

This thesis is based in the definition of Kubow and Fossum (2003), who argue that teachers are the basis of professionalism "[…] professionalism describes the relationship between a given society and a certain set of workers. Teacher professionalism is reflected when a society vests authority in teachers, who in turn accept this responsibility for providing a particular expertise and service. Teacher professionalism, however, involves more than teaching subject or implementing instructional methods and activities. Teacher professionalism speaks to the deeper understanding that teachers possess about how classrooms and schools are structured, why they are structured in particular ways, and how teaching and learning might be structured differently to better meet the needs of students and societies" (p. 181). In addition, Sockett (1993) identifies four types of teacher professionalism: character, commitment, subject knowledge, and pedagogical knowledge. He contends that professionalism is about the quality of the practice.

For Marcelo and Vaillant (2009), professionalism refers to peoples' and institutions' capacity to develop a quality activity committed to the educative community in a collaborative environment. In the same regard, Marcelo and Vaillant make reference to Hargreaves and Goodson (1996), who note that this kind of community is not far from the demands of teachers, who reclaim the chance of working by teams, cooperate and plan educative proposals together, referring to both initial teacher education and lifelong learning.

The last term, *professionalization*, is conceived as the process used to pursue, develop and maintain the closure of the occupational group, which is often channelled by maintaining and raising professional qualifications, standards and social status. According to Abbott (1988), professionalization was intended to promote professionals' own occupational self-interests in terms of their salary, status and power as well as the monopoly protection of an occupational jurisdiction (Abbott, 1988). However, professionalization of the teaching profession is commonly related to general standards, best practices, qualifications and the existence of professional associations, as characteristics shared with high-status occupations.

The differences between the terms professionalism and professionalization are explained by Ornstein and Levine (1997), cited in Kubow and Fossum (2003), when associating professionalization with entry requirements, licensing practices and national qualifications for teachers, and professionalism to the particular expertise, authority and autonomy of

teachers to determine their work conditions and their effectiveness as teachers (p. 182). Carr-Saunders and Wilson (1927, cited in Thai, n.d.) also determine some differences when professionalism is linked to individuals: professionalization is associated with the development of bodies that establish qualifications for entrance to a professional practice or activity.

The professionalization of teachers starts in teachers' initial education, and continues to affect the entire career and body of teachers. Assuming that teaching is a profession, and initial teacher education aims to create the basis for students to grow into professionals, through the suitable professionalism of the teaching career, the development of a coherent professionalization path is necessary to raise teacher education quality. As a directly proportional effect to this dynamic, students who feel like professionals take into account the significance of professionalism, thus the level of the profession rises, giving professionalization a higher status, which in turn reflects onto teachers as a collective.

3.3.2. STATUS: THE SOCIAL DIMENSION

"A negative view of the teaching profession, either by society as a whole or when perceived by teachers themselves, can impact the recruitment of high-quality professionals into the teaching profession. It can also affect whether teachers stay in the profession" (OECD, 2014b, p. 188).

This study cannot omit the close relationship between initial teacher education and the future development of professional identity. Furthermore, as the literature shows, identity is also related to teachers' status and therefore to professionalization and professionalism. In Epstein's words, identity "represents the process by which the person seeks to integrate his [sic] various statuses and roles, as well as his diverse experiences, into a coherent image of self" (Epstein, 1978, p. 101). Kubow and Fossum claim that "Teacher status is reinforced when a society sees the attributes, value, and efficiency of the teacher's role. Prestige for the teaching role emerges from the public's view of the complexity of the work involved" (Kubow and Fossum, 2003, p. 188).

A rise in teachers' conditions related to status was also encouraged during the 5th World Congress of Education International, (2007), as expressed in this statement: "It is of crucial importance to grant the teaching profession a high status not just for the sake of the quality

of education, but also for the progress of societies as a whole" (Education International, 2007).

Collins English Dictionary (2003) defines status as "a social or professional position, condition, or standing to which varying degrees of responsibility, privilege, and esteem are attached" or "a high position or standing; prestige". *Random House Kernerman Webster's College Dictionary* (2010) refers to "the position of an individual in relation to another or others; social or professional standing". Status is frequently connected to prestige. The *American Heritage Roget's Thesaurus* (American Heritage Dictionary Editors, 2013) defines prestige as "The level of credit or respect at which one is regarded by others".

Hoyle (2001) argues that status can be divided into three components: occupational prestige, related to the "public perception of the rank of teaching in a hierarchy of occupations" (p. 139); occupational status, where teaching is a category to which "knowledgeable groups" (politicians, social scientists, etc.) allocate status (p. 144); and occupational esteem, in which an occupation is held in esteem by the general public by virtue of the personal qualities which members are perceived as bringing to their core task (p. 147). In other words, this refers to public regard for teachers' care, commitment, competencies, etc. Hargreaves et al. (2006) analyse how the everyday use of *teacher status* corresponds to "occupational prestige", the kind related to society and public perception.

Under these definitions, status, as occupational prestige, could be understood as one of the social dimensions affecting teachers' identity. It is teachers' position related to their respective societies, and it is therefore exclusive and unique in each society. The way society values teachers' work has a great impact on teachers' image, identity and ways of understanding the profession. Social image comes out as a multiple-dimension term which interferes in professional identity. This construct is formed, as Bolívar (2006a) implies, by teachers' self-esteem, self-concept and social image, which are defined by their expectations, realities, stereotypes and working conditions.

This status is often related to an earned qualification, as an evidence of political, administrative and social approval. Vlasceanu, Grünberg and Parlea compiled in 2007 a glossary of basic terms and definitions for the OECD. They relate several terms to qualifications, status and professionalization: accreditation is associated with the award of a status of recognition; accreditation status to a "[…] formal recognition benefiting an institution or specialized programme for meeting the appropriate standards of educational

quality […]" (p. 27); and, professional status to professional recognition and the holders of a qualification.

To detect what components are involved in teacher status, Hargreaves et al. (2006) carried out a study including parameters from public opinion, media, teachers and associated groups, and recruitment managers. The findings show how the characteristics of social status conferred to teachers are typically associated with five aspects common to other professions: offers an attractive lifelong career, enjoys positive media images, enjoys high financial remuneration, is valued by government and is subject to external regulation.

Other authors have dedicated their studies to components of status, such as Firestone and Bader (1992), Darling-Hammond, Wise and Klein (1999), Odden and Kelley (2001), Ingersoll (2003) and Barber and Mourshed (2007). The proposed elements for raise teachers' status were teachers' licences and training, working compensation and working conditions, issues about distribution of power, authority and control over teaching curricula, evaluation and budgets, teachers' knowledge and academic ability.

Marcelo and Vaillant (2009) reassert the difficulties to measure and describe status as a social valuation. They also summarize the elements influencing this concept and assume that generally a profession enjoys great prestige when society holds in high consideration the services provided by the members of that profession, who in return should, in society's opinion, be rewarded with a wage level reflecting the importance of their work. Owing to the high relevance of this topic, teachers' status in each country is included in Sections 4.1.5.5 (China) and 4.2.5.5 (Spain), and the consequences of status are tackled in Section 4.3.2.

3.3.3. PROFESSIONAL IDENTITY: A PERSONAL AND MULTIDIMENSIONAL CONSTRUCT

The notion of identity construction is connected to social context, culture, time, location and ethnic group, among other circumstances and elements. Experts have analysed this concept rooted to different subjects (individual/social/collective, public/private, personal/professional, gender, cultural, etc.) and sciences (psychology, philosophy, sociology, anthropology). This section goes into depth about teachers' professional identity and how it is related to their status and professionalization.

A majority of authors (Day, 2012; Canrinus, 2011; Marcelo and Vaillant, 2009; Bolívar, 2006a) agree that professional identity pertains to how teachers see themselves, to their self-

image, to what and who is a teacher, to the meaning that links teachers with their profession and subject, and how they relate to their professional context. It is an adaptation of teachers to their own relevance scale: what is teaching for them (we are what we do), how they value related characteristics (knowledge, competencies, socialization, status), and their relationship with their context and institutions (our identity for others).

Professional identity is conferred by specific features which differ from one profession to another: it gives a profession a sense of being and a purpose (role) and a way to act and to be valued (status). Studying teachers' identity, framed within initial education, is therefore related to two main topics: a common element for all teachers (as implied in the profession) and an individual element (linked to the student personality, experiences, study contexts). A third component, related to the social dimension, goes beyond initial teacher education, since adjustments in this aspect are affected by many variables which are neither measurable nor manageable inside universities or teachers' programmes (social recognition, valuation and demands).

One of the characteristic of professional identity, stressed by multiple experts (Goldron and Smith, 1999; Dillabough, 1999; Bolívar, 2006a; Marcelo and Vaillant, 2009) is dynamism. Teachers' professional identity is determined by interpersonal relationships, teachers' experiences, classrooms, groups' personalities, etc. It evolves and develops in all its components (knowledge, personal and social) throughout the complete career. Consequently, policies cannot ignore the fact that initial teacher education may set the foundations to further develop a strong identity for teachers.

Gónzalez-Calvo et al. (2014), based on Atkinson (2004), Ruohotie-Lyhty (2013) and Thomas and Beauchamp (2011), state that "[…] the identity created at such stage and leading to the creation of the professional identity corroborates that these first approaches to the profession are the most important ones in shaping the teaching identity" (Gónzalez-calvo, et al., 2014, p. 113).

Alongside the idea of locating teacher education as the first step to building teacher professional identity, Marcelo and Vaillant (2009) remember that teachers' professional identity starts being built in their initial teacher education period, then it gets consolidated after they graduate, growing and evolving during their whole professional career. Conferring this statement Bolívar (2006a), delimits teachers' professional identity into four complementary levels (p. 51):

1. General frame, common to all professions.

2. A "basis" common to all teachers, sometimes called "core knowledge", which implies the whole of all required knowledge to work as a teacher.

3. A specific level depending on the education level, the subject and the department.

4. An individual level which is defined by personal and professional knowledge, as a result of a particular biographical and professional background.

Beijaard et al. (2004) analysed international journals from 1988 to 2000 and how teachers' professional identity emerged as a research area at the end of the 20th century. They note that most studies on teachers' professional identity fall into three categories: the formation of professional identity, the characteristics and elements of professional identity and identity as a narrative told by a teacher (2004, p. 109).

The first classification is strongly related to our subject at hand, teachers' initial education, forming teachers' professional identity. Beijaard et al. (2004) mention Bullough (1997) when affirming that "Teacher identity—what beginning teachers believe about teaching and learning as self-as teacher—is of vital concern to teacher education; it is the basis for meaning making and decision making. […] Teacher education must begin, then, by exploring the teaching self" (Beijaard et al., 2004, p. 109).

Beijaard et al. also analyse nine studies concerning the formation of teachers' identity. Their overview highlights important results: teachers' identity is manifested in classroom practice and is, to some extent, unique (Coldron and Smith, 1999); Student teachers can be equally successful in their professional identity formation although they follow different developmental paths (Antonek et al., 1997). Some studies draw attention to specific issues related to teachers' perceptions of professional identity, such as the teaching of low-status subjects in schools (Paechter and Head, 1996).

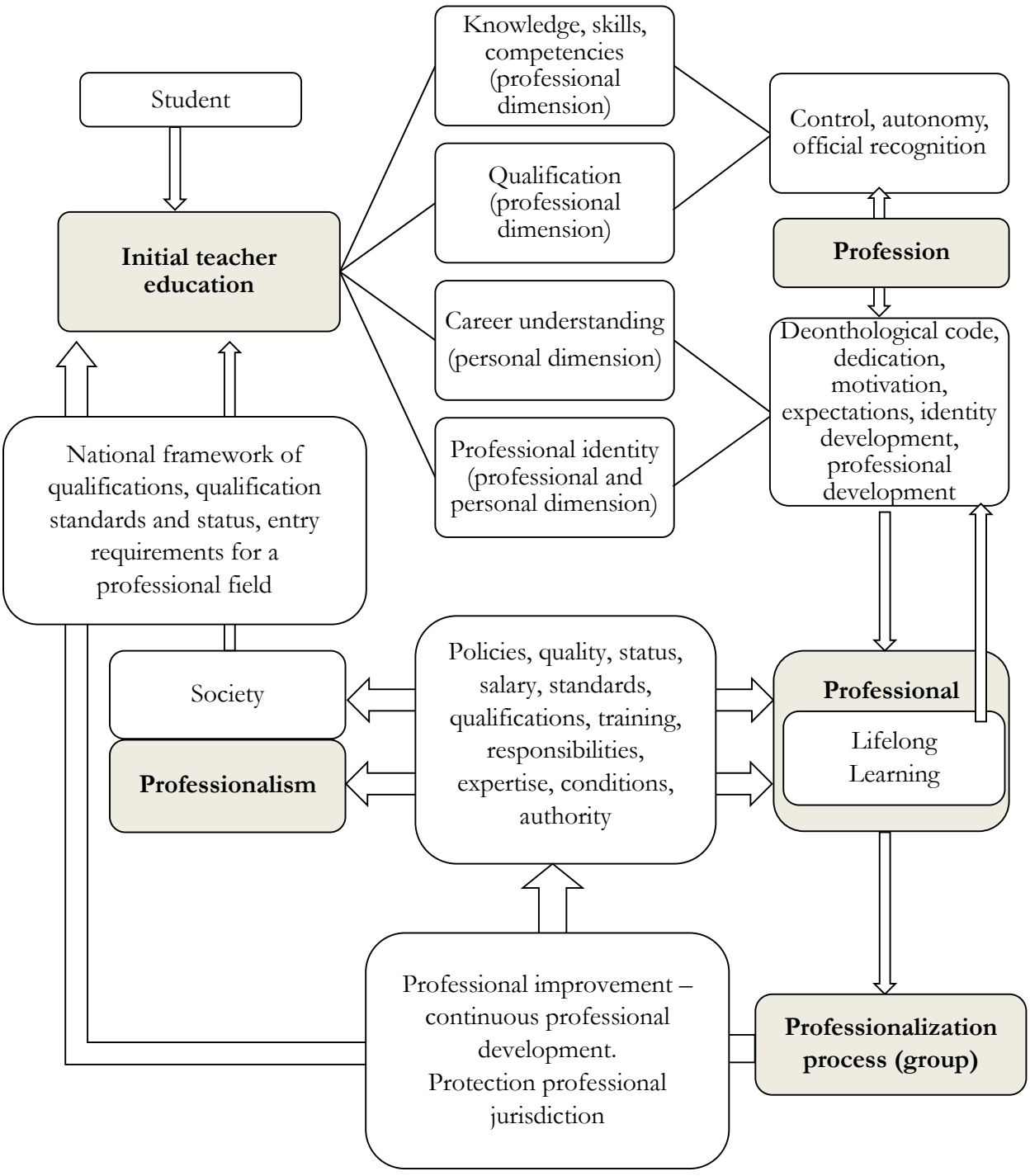
While students are becoming teachers, the construction of their identity is interconnected to others around them, contexts and new knowledge. Fuller and Bown (1975) indicate that "they feel stimulated, apprehensive, exposed, endangered, confused, discouraged, touched, proud, and lost – not necessarily in that order" (p. 47). With any identity crisis, a new identity appears.

Danielewicz (2001), Knowles (1992) and Steffy, Wolfe, Pasch, and Enz (2000) (as cited in Chong et al., 2011), state that initial teacher's programmes continually challenge students' sense of identity and personal knowledge. They also affirm that thanks to the university and the settings of field experiences during the process of becoming a teacher, students continue to reconstruct their self-as-teacher image while constructing and integrating an emergent sense of professional identity.

Somehow these components integrate into what Manso and Valle (2016) called lifelong teacher's education. The authors highlight that "learning" is a constant state for teachers, since initial teacher education cannot cover all the knowledge needed during the professional life of a teacher.

Figure 3.1 shows the connection of all the concepts explained above, and the relationship of teacher initial education as a first and basic step to further developing a professional career and identity. This figure aims to link teacher education and other indicators tackled in the thesis, such as qualifications, competencies, social values and status.

Figure 3.1: Teacher initial education: the first step to professional understanding and career development



Source: Researcher's original work

3.3.4. SECONDARY TEACHERS' PROFESSIONALIZATION, STATUS AND IDENTITY CRISIS

As shown in the last section, several authors and experts agree on giving these three concepts (professionalization, status and identity) an intimately and co-dependent relationship. For instance, an American report (National Center for Education Statistics, 1997) about teachers' professionalization and commitment found many authors, namely Darling-Hammond (1984, 1995), Sergiovanni and Moore (1989), Conley and Cooper (1991) or Talbert and McLaughlin (1993), thinking that "The key to improving the quality of schools, […], lies in upgrading the status, training, and working conditions of teaching, that is, in furthering the professionalization of teachers and teaching" (p. 1).

Unfortunately, alongside the relevance of these concepts, several authors have also noticed the deterioration of teachers' conditions and status (Kubberud, Helland, and Smith, 1999; Hargreaves et al., 2006; Marcelo and Vaillant, 2009). "In many countries teachers no longer retain the elevated status that they used to enjoy. Consequently, its effects are profoundly damaging to the life chances of the next generation. If teachers aren't respected in society, children won't listen to them in class, parents won't reinforce the messages that are coming from school and the most talented graduates will continue to disregard teaching as a profession" (Varkey Gems Foundation, 2013, p. 4).

This declaration is particularly true in the case of secondary teachers, where professional identity is linked to their specific subject knowledge (Webb, 2006; Bolívar, 2006b; Day, 2012), ongoing learning, opportunities for reflection (Webb, 2006), and often to a career that was not initially conceived inside the profession. As Bolívar, Domingo, and Pérez-García (2014) acknowledge, "The professional teaching identity, especially in secondary education, is based on the possession of a specific knowledge that can only be taught and whose acquisition is controlled. This identity has been seriously restructured in the information or knowledge society" (p. 106).

Teachers no longer have complete control on the information their students can get. Losing this control is partially related to the use of new technologies, inside and outside schools. The relationship between the use of technologies and teachers' identities in secondary teachers is analysed by McGrail (2006). The author found that the use of technology weakened professional identity without improving training and decision-making opportunities. On the other hand, abundant literature and researchers, such as Hoyle (2001),

Karros, and Johnson (2007) or Freedman and Appleman (2008), have connected teacher identity and status with teacher retention. Therefore, it is not unexpected that secondary teachers, having a weaker identity as teachers and suffering from a decline in social status, also show the highest dropout rate of all teachers.

Since primary education has historically been the main international concern, secondary teachers' professionalization, status and identity have been traditionally more complex to analyse and have not taken priority in the research world. Secondary teachers often have a solid scientific background, since their expectations were to become scientists, mathematics, biologist, artists, musicians or philosophers. Their paths did not primarily set off towards the teaching profession, and therefore their identities are less related to teachers' professionalization. They often take teaching as a last choice according to economic trends or personal needs, becoming a high risk for burnout and lowering the status of the profession.

Simultaneously with this gap between personal expectations and reality, initial education for secondary teachers has not usually responded to teacher's needs. Generally, one (in the best cases two) years is the length of time for courses, Masters' or degrees to prepare scientists or artists to become teachers, and furthermore to deal with adolescents, their families, the development of technology and the development of their own subjects.

Summing up the reflections in this theoretical part, it can be assumed that secondary teachers' professionalization, status and identity are important and strongly interconnected components when analysing teachers' initial education. In this study, two terms related to initial teacher education and formal structures (and not only to personal development and experiences) are analysed: status as social perception (through international studies) and professionalization (as in entry requirements, qualifications, standards).

3.4. TEACHER EDUCATION AND QUALITY UNDER AN INTERNATIONAL AND SUPRANATIONAL PERSPECTIVE

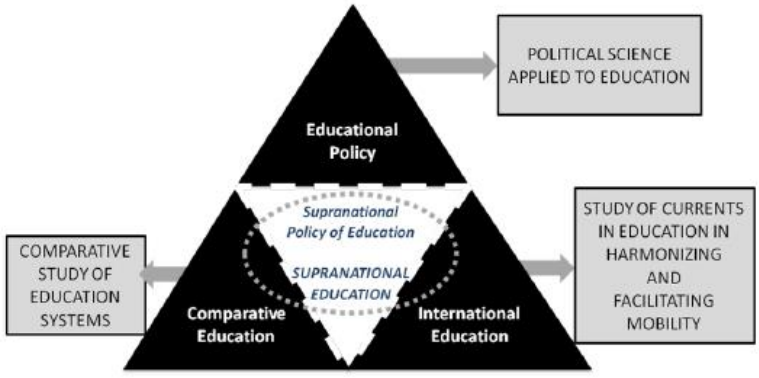
This section aims to complement the comparative study, which focuses on two national realities, hence an international study, with a supranational[17] perspective. The fact that "The

[17] According to the *American Heritage Dictionary of the English Language*, the definition of supranational is "Extending beyond or transcending established borders or spheres of influence held by separate nations", and international is "Of, relating to, or involving two or more nations". In this case, both definitions apply, especially in the case of Spain, where supranational policies come from the European Union. The study includes two nations (international) and extends beyond national spheres of influence when referring to international organizations as a basis for selecting quality standards.

changes in national education policy in isolation or within the borders of the nation-states cannot be understood without taking into account the impacts of supranational organisations" (Rinne, 2008, p. 665) is currently widespread among authors and organizations.

To select international standards for the research, it is necessary to agree on a general definition of supranational education which, in this case "[…] specifically involves global policies in education, fundamentally from international organizations, not in its strict sense but rather interpreting as educational policy any action in terms of education, teaching or training that are put into practice from organizations, or any proposal that arises from them as a recommendation global in nature for education, teaching, or training" (Valle, 2012, p. 117). Hence, this study targets whether, how and to what extent these realities are influenced by supranational policies, meaning guidelines and good practices recruited and published by international organizations, regarding terms of quality in teachers' initial education. International standards are selected from supranational policies of education. To better understand the relationship among these notions, comparative education, international education and education policies, Valle (2012) proposes the next figure:

Figure 3.2: Supranational Education as intersection area of Educational Policy, Comparative Education and International Education



Source: Valle (2012)

It is well-known that supranational policies of education have a limited range of action, since the autonomy and sovereignty of each nation prevails over international proposals. Therefore, it is assumed that other elements explained during the research, such as

However, in this case countries do not delegate power to other authorities and the documents released by the international organizations are presented as recommendations, hence non-binding documents.

globalization and student and teacher mobility, have also influenced current national policies of education. Indeed, educative structures, goals, and dynamics are part of a complex process affected by multiple factors, both national and international. National specific features are tackled in Chapter 4, this section underlines basic international guidelines from supranational policies, and Chapter 5 identifies supranational proposals regarding the quality of teachers' initial education. International organizations such as the World Bank, OECD or UNESCO and their recommendations regarding teacher education and quality are analysed, assuming that they have a certain impact on national policies and can offer a basis by which to better comprehend national trends.

The dialogue between supranational and national guidelines is one of the core elements for reaching a wider understanding, since "In globalisation and in the management of its progression, the central actors are nation-states, the agreements made between them, and the supranational powers constructed on these agreements, such as the World Bank, the International Monetary Fund (IMF) and the World Trade Organisation (WTO)" (Rinne, 2008, p. 665-666).

International organizations and the concept of quality

There is no consensus about an accepted definition of quality of education. Authors, educators, politicians, international organizations and stakeholders have tried to define it according to the terms they feel most beneficial. Paradoxically, there is a general agreement about the disagreement on a rigid definition and still, most studies agree that teacher quality is the single most important school variable influencing student achievement. There is also a certain unanimity about teacher education and some of the teachers' characteristics (like the ability to convey ideas in clear and convincing ways or to create effective learning environments for different types of students) having a direct link to education quality and performance (OECD, 2005a; UNESCO, 2006; Hanushek and Wößmann, 2007; Barber and Mourshed, 2007; Schleicher, 2011).

As a general meaning, *Collins English Dictionary* (2003) accepts quality as a "degree or standard of excellence, esp. a high standard". It is also widely accepted that quality has descriptive and qualitative characteristics as well as normative and quantitative ones. Quality in education has been generally used as a way to measure and compare educational systems structures, designs, outputs and other factors, according to certain homogenized parameters.

Various authors and organizations reiterate some variables when tackling quality in educative systems and teachers, aiming to detect and draft these general parameters. For instance, Adams (1993, p. 15) relates quality to five components: clear objectives, clear ethical and moral responsibilities, knowledge of the range of learning, having a user-friendly monitoring and accountability system of performance review and long-term commitment to standards of quality.

Almost contemporarily, in 1996, Darling-Hammond prepared a summary asserting seven conditions inherent to high quality, focusing on teachers' preparation. This set emphasizes that teacher education programmes should have a clear understanding of good teaching, practice and performance standards, a curriculum focused on child and adolescent development and learning theories, focused on a context of practice, include extensive clinical practice, have shared beliefs between university faculty and school practitioners, and use multiple instructional strategies (Darling-Hammond, 1996, cited in Imig and Imig, 2007, p. 105).

Undoubtedly teachers and teacher education in higher institutions are being placed as a core element towards quality when UNESCO-IBE (2013) indicates, "Whether understood as 'facilitators of learning' or 'leaders of learning', good teachers are essential for quality learning" (UNESCO-IBE, 2013, p. 3), and "Good quality education depends on giving teachers the best possible training […]" (UNESCO, 2014a, p. 236). However, teacher education and teachers' teachers have to face the complexity of a process where "The challenge is that quality in teacher education is such an elusive concept" (Imig and Imig, 2007, p. 99).

Regarding the notion of quality linked to higher education, UNESCO (1995) states that "Quality in higher education is a multidimensional concept which depends to a large extent on the contextual setting of a given system, institutional mission, or conditions and standards within a given discipline" (UNESCO, 1995, p. 30). It includes the quality of teaching, training, research, teaching staff and programmes, quality of learning, students, infrastructure, and academic context. Teachers belong to, and are involved in, all the aforementioned components as both active and passive agents, hence the parameters to measure and develop teacher education quality do not only refer to certain stages of the academic career but to the complete educative system, their workplace and general policies.

International organizations have delved deeper into this notion, trying to set a group of appropriate parameters enclosing all types of education. The UNESCO (2004a) *EFA Global Monitoring Report* dedicated a whole chapter to quality, its definitions, kinds and implementation. It recalled that in 2000 the *Dakar Framework for Action*, following the 1990 *World Declaration on Education for All* principles, defined quality as "the heart of education" and as a fundamental notion to determine enrolment, retention and achievement. Specific parameters to measure quality were not established, but the term was then linked to desirable qualities of learners, processes, content and system. In the same study, UNESCO divided quality into two levels: the level of the learner and the level of the learning system.

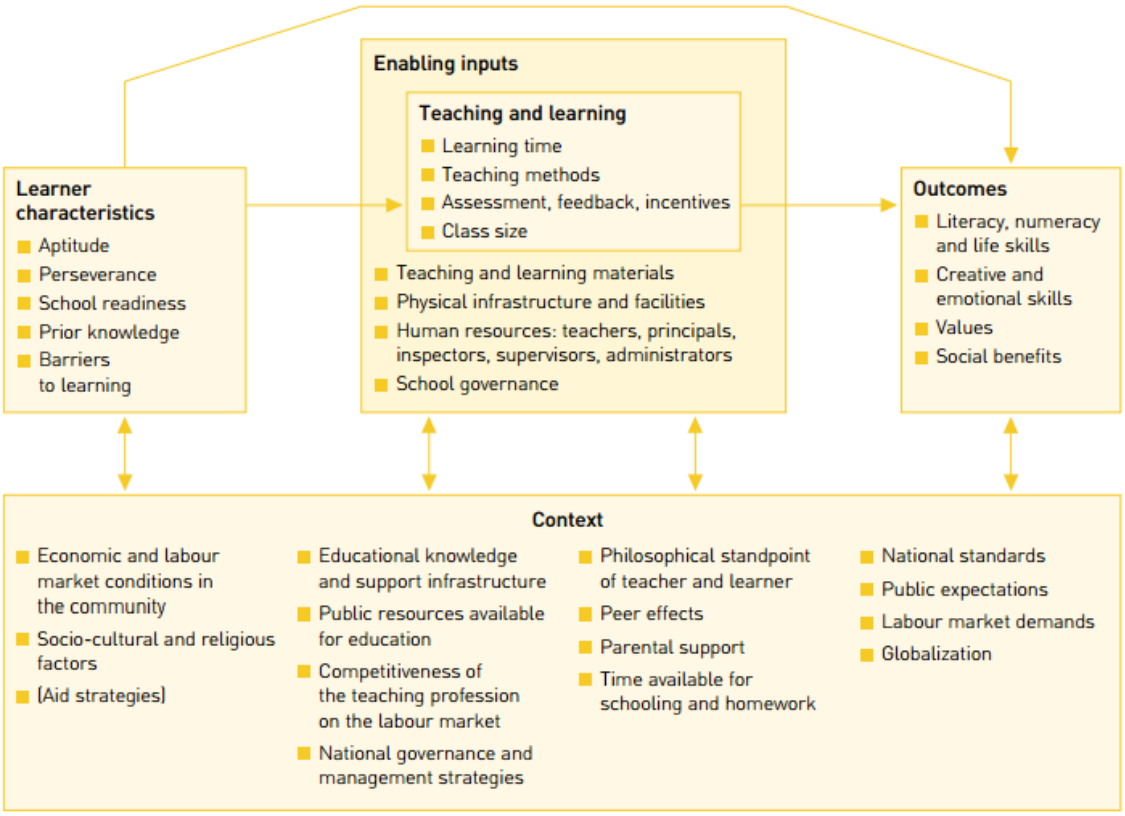
Another international organization identifying quality as a core concept was UNICEF when in 2000 it published a paper directly addressing this notion, *Defining Quality in Education*. It recognizes five dimensions: learners, environments, content, processes and outcomes. UNICEF, like many authors and international organizations, also stresses the dynamic perspective of quality, when affirming that, "Definitions of quality must be open to change and evolution based on information, changing contexts, and new understandings of the nature of education's challenges." (p. 4).

Likewise, UNESCO conceives of quality as a dynamic concept, constantly adapting to social and economic transformation (UNESCO, 2003). This international organization identifies ten key aspects that support quality education, comprising teacher education. Systems' quality aspects are related to the legislative framework (as a way to develop resource location, curriculum reforms, teacher education, and other elements of quality education), good policy implementation, administrative support and leadership, sufficient resources, and learning outcomes (UNESCO, 2004b).

To delimit the fundamental notion of quality used in this study, under a supranational perspective, the research refers to UNESCO. UNESCO (2004a) proposes a complex and comprehensive explanatory framework for understanding education quality. It organizes a combination of inputs, context, outputs, learner characteristics and their relationships. In this research, quality perspectives mainly focus on three dimensions: quality as resources and inputs (objective and comparable data such as student-teacher ratio, student enrolment, student quality, economic resources), quality as content (knowledge, skills or information) and quality as outputs or outcomes (achievement in cognitive skills or entrance rates to the next levels of education).

This framework is used in the research to develop the theoretical framework, further detailed in Chapter 2 (methodology).

Figure 3.3: UNESCO's quality framework



Source: UNESCO (2004a)

3.5. SUMMARY OF THE CHAPTER

This chapter introduces the background and main guidelines to further develop the dissertation. The contents have been chosen as the basis to analyse initial teacher education in the selected countries. Core concepts, initial teacher education and secondary education have been explained and harmonized, as a way to define and choose comparable benchmarks and to clarify which reality this research is addressing. Other and further detailed theories and models have been tackled, such as the programmes and institutions in which initial teacher education takes place, the foundations of the profession, paths, curriculum design, professional competencies and qualifications, and the process for selecting candidates for teacher education programmes.

Additional notions associated with social, personal and academic perceptions and outcomes (teachers' professionalization, status, identity, quality and standards by

international organizations) aim to complement the theoretical framework and to help understand the actual crisis for secondary teachers, the difficulties to improve and establish worldwide harmonized education programmes and initiatives which can cover all personal, school, regional, national and international needs.

The coming chapter addresses the current context and situation of each country.

CHAPTER 4

TERRITORIAL, SOCIO-POLITICAL, ECONOMIC AND EDUCATIONAL FRAMEWORK

Chapter 4 is divided into three sections: China, Spain and West-East cultural features. The subsections of China and Spain are in turn divided into the same subdivisions. This chapter aims to offer a wider overview and understanding of both countries and the implications of their cultures in education. It deepens on general knowledge, including economic and socio-political data, as well as in the general education system. The first subsections explain the agendas and participation of each of the countries in their own continent and in the world. The subsection of education specially focuses on secondary education, students and families.

4.1. CHINA

4.1.1. TERRITORIAL, SOCIO-POLITICAL AND ECONOMIC FEATURES

The official name of the country is People's Republic of China (PRC) or 中华人民共和国 in simplified Chinese characters.[18] In this study, the term China regards to what is

[18] Simplified Chinese characters is the standard writing system of mainland China, in contrast to traditional Chinese characters, still used in Taiwan and Hong Kong. The Chinese Government simplified some of the written forms of traditional characters as a way to make the written language more accessible and increase literacy among the large illiterate population. The first draft was

known as mainland China. Mainland China is the continental area of the PRC, including all the geopolitical regions directly under the jurisdiction of the PRC, except for special administrative regions (Hong Kong and Macau) and the island of Taiwan.

China is located in the eastern part of Asia, and because of its large territory is the country with most borders in the world, along with Russia. China borders with fourteen countries[19] and has marine-side frontiers with eight countries.[20] Mount Everest, Earth's highest mountain, is part of the natural border between China and Nepal. To the east, China is limited by the East China Sea, Korea Bay, Yellow Sea and South China Sea. The Chinese territory includes numerous islands such as Hainan, an d Chongming Island.

According to the Chinese State Council website, China's land area is 9,600 thousand km², which places it as the world's third largest country, and the largest country situated entirely in Asia. China is currently the world's most populous country, with a population of 1,360,720,000 inhabitants in 2013 (National Bureau of Statistics of China, 2014). It represents around 19% of the world's population. Life expectancy is estimated to be 75.3 years. Due to its family planning policy (one-child policy introduced in 1978 and reformed in 2013 and 2015), population growth is only 0.6% (2010-2015). The fertility rate reached 1.7 births per woman during the period 2010-2015, mainly because of the amount of the population living in rural areas, around 46.3%, who benefit from policies allowing more than one child (UNDP, 2014).

China divides its territory into 23 provinces, 5 autonomous regions, 2 regions with a high level of self-government (called special administrative regions: Hong Kong and Macau) and 4 municipalities (Beijing, Tianjin, Shanghai, and Chongqing), which directly depend on the central government. Chinese State Council official information (website) states that provinces and autonomous regions are divided into autonomous prefectures, counties, autonomous counties and cities, and in turn counties, autonomous counties and cities are divided into townships, ethnic minority townships, and towns. The Chinese administrative organization is represented in Annex 1.

published in 1956, and mainly entailed a reduction of the number of strokes per character, simplification of common parts of characters, replacing whole characters for simple versions and reduction of the number of characters in common use. The vast majority of Chinese websites, modern literature and press use simplified characters.

[19] North Korea, Russia and Mongolia to the North; Kyrgyzstan, Kazakhstan, Tajikistan, Afghanistan, Pakistan and India to the West; and Nepal, Bhutan, Burma, Laos and Vietnam to the South.

[20] North Korea, South Korea, Japan, Philippines, Brunei, Indonesia, Malaysia and Vietnam.

The capital city is Beijing, located in the north of the country. Beijing is one of the most populous cities in the world with, according to Chinese official data, 20.186 million residents in 2011. As explained above, Beijing is one of the four municipalities directly under the central government made up of 14 districts and two counties.

The Chinese Constitution came into force in 1982 (Chinese National People's Congress, 1982), establishing the Communist Party of China as the leader of the Chinese people. Its first article described China's political organization as a "socialist state under the people's democratic dictatorship led by the working class and based on the alliance of workers and peasants" (Article 1). Its ideological system has often been called socialism with Chinese characteristics, and its economic system a socialist market economy. The Chinese Communist Party was founded in 1921, and has been in power for 67 years (since 1949 when Mao Zedong proclaimed the establishment of the People's Republic of China).

Its second article states the National People's Congress as the organ through which the people exercise State power, and Article 57 sets up the National People's Congress as the highest organ of State power, elected for a term of five years (Article 60). The National People's Congress is responsible for the election of both the President and the Vice-President (Article 79). Local people's congresses at different levels are democratically elected, and all citizens who have reached the age of 18 have the right to vote and stand for election.

China does not have an official religion; however, there are several links to Chinese traditional moral codes, such as Confucianism. Barriers between beliefs are often vague, but according to the *World Factbook* there are significant percentages of folk religion (21.9%), Buddhists (18.2%), Taoists (< .1%), Muslims (1.8%), Christians (5.1%), Hindus (< .1%), Jewish people (< .1%) and Atheists or unaffiliated (52.2%).

The official language in China is standard Chinese or Mandarin, 普通话 (Putonghua). Mandarin is also, according to Ethnologue (Lewis, Simons and Fennig, 2015), the most commonly spoken language in the world. In addition, numerous dialects are used by the various ethnic groups living in China, including Yue (Cantonese), Wu (Shanghainese), Minbei (Fuzhou), Minnan (Hokkien-Taiwanese), Xiang, Gan, and the Hakka dialects or minority languages. The majority of the population belong to the Han ethnicity, although there are 55 minorities, such as Zhuang, Manchu, Hui and Tibetans.

The Chinese currency is the Yuan (CNY or ¥), also called Renminbi (RMB). During the period 2010-2014 the average equivalence of one dollar was, according to World Bank data, approximately ¥6.14.[21] During recent decades, China has undergone rapid economic growth. The GDP [22] (gross domestic product) at Purchasing Power Parity (PPP) [23] rose from US$4,520 billion in 2002 to US$15,154 billion in 2012 (IMF), and kept increasing, reaching US$18,088 billion in 2014[24], ranking as the 2nd strongest economy in the world, after the USA (3rd if including the EU), and the 2nd (again 3rd if including the EU) when analysing its nominal GDP.[25] UNESCO (2011c), analysing the World Bank data, gives China and its economic expansion one of the main roles in the recovery of the East Asia and Pacific region from the economic crisis in 2009-10.

However, the distribution of wealth is still quite uneven, as the Chinese GDP per capita (PPP) [26] drops to US$9,800, placing China in the worlds' 121st position (The World Factbook, n.d.). Analysing its workforce, China takes again international first place with 797.6 million active workers. The distribution of the labour force by occupation is very homogenous, with 33.6% dedicated to agriculture, 30.0% to industry and 36.1% to services. In 2013, the unemployment rate was a low 4.1%, ranking 32nd in the international classification. According to Global Asia (2012), the Chinese average salary is US$656 (¥4,027) per month while the minimum salary ranges, according to the BBC (2015), from US$296 (¥1,820) in Shanghai to US$167 (¥1,030) in Guizhou.

Data in the *World Factbook* shows 6.1% of the population living below the poverty line, when the national poverty line was set at ¥2,300 (US$374) in 2011. Due to the marked differences in standards and cost of living, it is pertinent to complement the analysis with the 2014 Human Development Index, a composite index measuring average achievement in three basic dimensions of human development (long and healthy life, knowledge and a decent standard of living). In this case, China is part of the high development index group, with a value of 0.719 (91st in the international ranking). The average of mean years of

[21] All currency conversions in this study have been made according to this rate.
[22] GDP refers to the value of all final goods and services produced within a nation in a given year.
[23] PPP is the sum value of all goods and services produced in the country valued at prices prevailing in the USA in the year noted (in this case year 2013). This rate gives data a standard value.
[24] The economic data has been collected from the *World Factbook*, with its main source the World Bank and other statistical agencies. This resource offers a standardized analysis including both countries of this research, and worldwide rankings. All rates are in 2013 US Dollars ($).
[25] Data from 2013. Source: United Nations, IMF and the World Bank.
[26] This value is the GDP on a purchasing power parity basis divided by the population.

schooling[27] are 7.5, while the average expected years of schooling is estimated at 12.9 (UNDP, 2014).

In 2012, the Chinese total budget for education was ¥2769.597 billion, equivalent to approximately US$447 billion. China's interest in improving education is shown through many policies, including the increment of investment in education, mainly during the last decade. While from 1992 to 2002 China's education budget raise only from 2.7% to 2.9% of its GDP, it has grown almost 1.4 points during the last ten years, reaching 4.28% in 2014 (National Bureau of Statistics of China, 2014).

4.1.2. CHINA IN THE WORLD

China's relations with the world have undergone historic changes and challenges. From being a highly powerful and influential country led by dynasties, going through isolation from western nations and closeness to communist countries, passing through a period in which western influences were (and somehow still are) highly stressed, to the current situation where China seeks its own international identity while maintaining its cultural background. Eventually, China has gained one of the most potent roles in the international context.

A national emerging process, later followed by the development of a synergic network with western countries, started shortly before the end of the Great Proletarian Cultural Revolution. The so-called Cultural Revolution is understood at the present time as one of the darkest periods of Chinese history, which lasted from 1966 to 1976.

After this period, Mao decided to gradually open China to the world. One of the chief driving forces of Chinese openness was the minister Zhou Enlai, who, following Mao's decision, started to establish foreign relations with the USA at the beginning of the 1970s, originating the visit of Richard Nixon to Beijing in 1972. After the death of Mao Zedong in 1976, China started a process of internal turmoil originating from power and leadership conflicts, which ended when Deng Xiaoping took power, officially in 1981. The starting point for China becoming one of the most powerful economies was launched.

[27] According to the UNDP, mean years of schooling is the average number of years of education received by people aged 25 and older, converted from education attainment levels using the official durations of each level.

As a consequence of China's history, Chinese intellectuals and political leaders have reflected on whether China should view itself as a member of the socialist world, the third world, or the western-orientated international trading society that encompasses Europe, the Americas, Japan and the rest of the Pacific Rim (Nathan and Ross, 1997). Gradually, China's role in the 21st century has been shaping deeper integration into the international community, mutual understanding and growth as an economic power.

China was, in 1945, one of the five founding members of the UN, along with France, the Soviet Union, the UK and the USA. At that time, it was still the Republic of China (ROC)[28] and it was not until 1971 that the UN recognized China, as People's Republic of China, as a full member, taking over the ROC membership.

Nowadays the UN gathers 193 Member States, and embodies one of the most representative international organizations. According to Article 23 of the United Nations Charter, ratified on October 1945, the UN Security Council shall consist of fifteen members of the UN, of which the five founders are permanent members, and the other ten are non-permanent members elected every two years. China, as with the other permanent members, also holds power of veto over UN resolutions.

China, as a UN member, collaborates in all of the UN organs and was, in 2015, the sixth largest donor (5.148%) to the UN's regular budget (United Nations Committee of Contributions, 2014). It has a great presence in regional and international institutions related to the UN and in the specialized UN agencies. It has been a member of the World Bank since 1945, of the World Tourism Organization (UNWTO) since 1983, and of the United Nations Industrial Development Organization (UNIDO) since 1985. China is also involved in related organization such as the International Atomic Energy Agency (IAEA) since 1984, the Organization for the Prohibition of Chemical Weapons (OPCW) since 1997, and the World Trade Organization (WTO) since 2001. China was one of the top 10 providers of assessed United Nations Peacekeeping operations in 2013-2015; it ranked 6th with 6.64% of

[28] The Republic of China (ROC) included the island of Taiwan. After the Chinese Civil War (1927-1950) the conflict of sovereignty over the whole of China persisted. Chinese Nationalists led by Chiang Kai-shek fought against the Chinese Communist Party, led by Mao Zedong. By 1949 the Nationalist army was defeated and the Communists founded the PRC. At present, Taiwan is internationally recognized as a province of China (by the UN, the EU, the USA).

the contributions. It has also been a member of the International Labour Organization (ILO), since 1919, the year in which the ILO was created as part of the Treaty of Versailles.

In the economic field, Chinese participation in international organizations is noticeably high. Its quota and voting power in the International Monetary Fund (IMF, 2015) is 4% and 3.81% respectively. Out of all of the members, this participation puts China in the sixth most powerful position. As an emerging country, China is also a founding member of the BRICS, along with Brazil, Russia, India and South Africa.

As previously explained, the Chinese economy ranks second in the world; however, China not being a member of the G7 has provoked many international criticisms towards the underrepresentation of emerging countries. The G7 is supposed to be composed of the wealthiest developed countries by national net wealth, which at the moment means Canada, France, Germany, Italy, Japan, the UK, the USA and the EU. Since China is still included by the International Monetary Fund (IMF, 2014) as an emerging and developing country, its membership cannot be considered. It is however a strong member of the G20 and will host the G20 2016 summit.

In contrast with China's high participation in the international economic field, its contributions related to the international social, educational and cultural fields are still slightly inferior. For instance, China's funding to the UN Refugee Agency only achieves 34th position (UNHCR, 2012), below poor countries such as Hungary, Greece, Morocco, Colombia, Poland or Turkey. It ranks 32nd in the World Food Program (UN Food Program, 2015), and is not included in the top 20 countries which contribute to UN Women (UN Women, 2013), even when less powerful countries like India, Ireland and Korea are counted in the list. China is not a member of the OECD, hence not of the Development Assistance Committee (DAC). However, it is considered one of the OECD Key partners (like Brazil, India, South Africa and Russia), and since 2009, a China-DAC Study Group has been established to facilitate mutual learning on poverty reduction.

Nonetheless China was, in 1946, one of the founding countries of UNESCO. Since then, many programmes have been promoted through its office in Beijing.[29] Inside the country, UNESCO's programmes have been steadily increasing, and UNESCO is providing high-level policy advice for the preparation of the *National Medium and Long Term Education Reform*

[29] A full list of activities can be consulted at:
http://www.unesco.org/eri/cp/factsheets/CHN_facts_figures.pdf [March 18, 2015]

and Development Plan Outline, including the use of information and communications technology (ICT) in education, lifelong learning, inclusive education and education for sustainable development; UNESCO is also working to support the nationwide implementation of the Plan; to launch the *EFA Global Monitoring Reports* in 2010 and 2011; to strength the skills and knowledge of staff in the Ministry of Education and Provincial Education Departments in education sector diagnosis and planning; and to raise awareness about the importance of sexual education in preventing sexually transmissible infections among young people, assisting the local adaptation of international standards, and strengthening the capacity of teacher training institutions in integrating comprehensive sexual education into pre-service teacher education (UNESCO, 2012b).

Nowadays, there are seven UNESCO Category 2 Centres[30] in China, of which one belongs to the category UNESCO Education. There are only seven UNESCO Education Category 2 centres in the world: the International Research and Training Centre for Rural Education (INRULED) is located in Beijing. Besides this, there are 24 UNESCO Chairs, which aim to strength UNESCO's academic and scientific network. UNESCO development is also being enriched by a range of universities, academic and research institutes such as the Chinese Academy of Sciences, the Chinese Academy of Science and Technology for Development and the Chinese Academy of Social Sciences (UNESCO, 2012b).

China has seven UNESCO Chairs related to education, and the one focusing on Teacher Education is located in East China Normal University (Shanghai). Other education Chairs cover Distance and Open Learning (Shanghai), Higher Education (Beijing), Literacy and Adult Education for the Training of Personnel in Rural Areas (Hebei), Entrepreneurial Education (Zhejiang University), Technical and Vocational Education and Training (TVET) and Lifelong; and Learning and Comparative Education (both in Hong Kong).

4.1.3. CHINA IN THE EAST ASIAN CONTEXT

Some features made Asian countries difficult to place in a firm geographical classification. Asia is the largest and most populous continent in the world; Asia and the Pacific is the home

[30] This category of centre, according to UNESCO's definition, has the aim to render technical assistance in areas of UNESCO's competence through capacity-building and training, research, networking, knowledge-sharing and information exchange in their respective spheres of programmatic competence and specialization, hence represent a valuable resource for UNESCO.

of 60% of the world's population, distributed in around 43,810,582 km². The Asia-Pacific's combined economy made up in 2010 31% of the global GDP, making it the world's second largest aggregate economy next to Europe (UNESCO, 2014b). It bounds with three other continents (Europe and Africa by land and Oceania by sea), but the limits are not certainly clear. There are even some references to Euro-Asia as a continent; also its scattered geography and culture make Asia a complex international meeting point.

In the UNESCO and OECD divisions, China is included in the Asia-Pacific region; UNICEF places it in East Asia and the Pacific, and the Statistics Division of the United Nations in East Asia. As the data shows, for historical, geographical and cultural reasons, China has traditionally been considered part of East Asia.

East Asia is the eastern subregion of Asia, which officially includes China, (Hong Kong and Macau as special Chinese administrative regions), the Democratic People's Republic of Korea (North Korea), Japan, Mongolia and the Republic of Korea (South Korea). According to World Bank data, it covers about 11,525,170 km², which represents approximately 27% of the continent. It is also highly populated, with about 1,556,176,903 inhabitants, 21% of the global population. The most populous countries are China and Japan (128 million).

The Human Development data shows noteworthy dissimilarities, since Japan (0.890) and South Korea (0.891) are included in the very high human development group, China (0.719) in the high group, Mongolia (0.698) in the medium classification, and there is no data for North Korea.

In the educational field, one of the most well-known international studies, PISA 2012 (OECD, 2014c), awarded East Asian countries noticeably high results. The city of Shanghai (China) had the best results, not only in the East Asia subregion but in the world. The Chinese special regions of Hong Kong and Macau participated as autonomous areas and obtained high international rankings, 3rd and 6th respectively. Japan and South Korea also accomplished very high grades: South Korea achieved 5th position and Japan reached 7th.

In this case, there is not an East Asia supranational organization which covers all economic, cultural or political matters. Collaboration among the countries included in this area is organized through specific agreements, mainly in the economic field; for instance, the China-Japan-Korea free trade area, for which negotiations started in 2012; the Closer Economic Partnership Arrangement (CEPA) with the Government of the Special

Administrative Region of Hong Kong; and the CEPA with the Government of the Special Administrative Region of Macau. Both of these started in 2003 as an application of the "One Country, Two Systems" Chinese motto (referring to the acceptance of a different system while maintaining unity as a unique country).

However, when extending the analysis to the Asia-Pacific area, numerous relevant treaties[31] between China and the Association of Southeast Asian Nations (ASEAN) have been signed; ASEAN is a supranational organization made up of ten countries (Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam). It is one of the strongest partners of China, and during the last decade their collaboration has progressively increased. The Regional Comprehensive Economic Partnership was signed in 2002, which proposed a free trade agreement (FTA) between China and the Member States of ASEAN; and they also have the Agreement on Trade in Goods of the China-ASEAN FTA (2004), the Agreement on Trade in Services (2007) and the Agreement on Investment (2009). According to ASEAN other agreements refer to cooperation in sanitation, agriculture, ICT and non-traditional security issues.

According to ASEAN Plus Three (n.d.), Chinese ties with ASEAN were strengthened in 1997 with the creation of ASEAN Plus Three (APT or ASEAN+3). China, Japan and South Korea were invited to participate in a new organization, alongside the ten ASEAN countries, to improve regional cooperation. ASEA+3 later became one of the strongest organizations in Asia. Economic participation was later expanded to 18 countries, at the East Asia Summit, which included ASEAN+3 plus India, Australia, New Zealand, the USA and Russia.

According to ASEAN+3 statutes, collaboration areas include politics and security, finance, tourism, agriculture and forestry, energy, environment, rural development and poverty eradication, social welfare, youth, culture and arts, women, and education, among others.

As events have demonstrated, China's role in East Asia is quite major, and its collaboration with other countries in the continent, mainly with Southeast Asian nations, is swiftly increasingly. The next section focuses on how that collaboration is being translated

[31] Chinese international trade agreements and their development can be followed on the China FTA Network: http://fta.mofcom.gov.cn/english/index.shtml

to education policies and guidelines proposed by both international and Asian supranational organizations.

4.1.4. EDUCATION GUIDELINES IN THE EAST ASIAN CONTEXT

Overview of Asian education policy development

While in the middle of the 20th century, Europe was undergoing a process of harmonization and supranational understanding, the Asian starting point was radically different. This region was suffering from many decolonization operations along with ongoing armed conflicts. The USA ended its occupation of Japan (1951), the UK finished its occupation of the Federation of Malaya (1957), French occupation ended in both Cambodia and the Kingdom of Laos (Geneva Accords, 1954), the first Indochina war came to an end (1946-1954) and the second Indochina war, also called the Vietnam war, in which Vietnam, Laos and Cambodia were involved, started (1955-1975). Mao Zedong proclaimed the People's Republic of China (1949), China intervened in the Korean War (1950-1953) and the Cultural Revolution took place (1966 to 1976). Some years later, in the 1970s, the notion of Asian Tigers or Asian Dragons appeared, referring to Hong Kong and Taiwan (Chinese regions), Singapore and South Korea as economically prosperous countries.

In this unstable context, education harmonization was not a priority, hence when regarding education policy development, it is necessary to resort to international analysis. Major concerns were expressed in the EFA project, through specific analysis made of the Asia-Pacific region. At that time, the progression to reach the six EFA goals set the pace for many countries to develop their own policies.

According to UNESCO (2014b), since the establishment of the EFA, Goals 1 and 2, related to early childhood education and universal primary education, have experienced significant progress. Still, many children remain out of school and full achievement remains a distant goal. However, several countries have been instituting holistic childhood care programmes, and gender equity is improving. Goal 3 and 4, referring to youth and adult skills and improving adult literacy, have received less attention. East Asia and the Pacific still have 18% of the region's illiterate adults. Nonetheless gross enrolment rates in lower and upper secondary education have increased across the region since 2000. Goal 5, dedicated to eliminating gender disparity and achieving gender equality in education, is still far from being achieved. However, gender disparities in primary and secondary education have lessened.

And Goal 6, quality education, has been progressing in enrolment and participation, gender parity and literacy. However, the quality of learning at different levels is a great concern, as well as the status of teacher education, which varies among countries.

Since the beginning of the EFA project, this dynamic region has gone through rapid changes and is nowadays facing development challenges (UNESCO, 2014b). UNESCO's regional office has detected some difficulties to address in the post-2015 agenda, as well as some priority areas. The Asia-Pacific region's challenges (UNESCO, 2014b, p. 41-42) are:

- Significant disparities, both among and within countries, in enrolment, retention, progression and learning outcomes, often on the basis of gender, socio-economic status, ethnicity, language, geographical location and disability.

- Rapidly increasing demands for post-basic education and pre-primary education, hence the urgent need to increase equitable access to all levels of education from early childhood to higher education and adult learning.

- Insufficient quality of education to effectively and efficiently support and improve learning for all learners.

- Poor quality of teachers and teaching, often due to gaps between policy and practice, a lack of systematic teacher training and development, and non-conducive work environments for teachers.

- Lack of connection between what is taught in schools and education programmes and what is needed by people for their effective participation in the increasingly interconnected and rapidly changing world.

- A lack of long-term commitment to and sustained and well-resourced action for education.

- Poor and opaque governance of education, including non-transparency, weak accountability, corruption and malpractices.

Priority areas for action are: lifelong learning; equitable and inclusive access and participation in quality learning at all levels of education; equity as a general principle (for adults, gender, etc.) eradicating all forms of exclusion and discrimination; quality education in learning processes (content, environment and outcome), which requires a professional and

committed teaching force; relevance of learning towards a combination of generic, technical and vocational skills, and acquisition of 'non-cognitive' skills, transversal competencies and attitudes; responsible and participatory governance to strengthen transparent and accountable education systems, eliminate corruption and inequalities, and improving effectiveness of policy implementation. It is also necessary that the post-2015 agenda includes clear and progressive targets for domestic investment.

Since the beginning of the century, Asian societies, especially those of the East Asian countries, have been experiencing rapid changes in the economic, political and cultural fields. Still, Townsend and Cheng (1998, cited in Mok, 2006), identify some major challenges in all East Asian societies, referring to significant increments in human progress, information and technology in education delivery, knowledge economy and the changing university and widespread increase of higher education and the need for quality control. They also refer to the East Asian financial crisis and the need for post-crisis adjustments, as well as social and political fluctuations and the need to reform higher education.

As a reaction to these challenges, Mok and Welch (2003) notice typical patterns in education development in East Asia, including Hong Kong, Taiwan, Singapore, South Korea, mainland China and Japan, among others. The authors examine numerous comparative studies, and distinguish trends of marketization and corporatization as a way to make Asian countries more competitive, which in turn promotes lifelong learning and quality education policies. Other policy trends have led to privatization, drawing foreign investment and encouraging private economic activities while cutting public activities and public wages, and drawing away from states responsibilities for education as well as for other social areas.

However, the expansion of higher education into the private sector, according to Barnett (2012), has created new concerns about the quality of education, and increased other issues like the fact that explosive enrolment rates in the Asia-Pacific are putting pressure on systems, resources, facilities and teacher/student ratios. The author also reports corruption to be a major problem in higher education institutions in Asia, evidenced by plagiarism, falsification of data and academic dishonesty.

Cheng and Townsed also identify common trends in the Asia-Pacific region (Cheng and Townsed, 1998, cited in Mok, 2006, p. 25-26), comprising:

- The re-establishment of new aims and a national vision for education;

- The expansion and restructuring of education;
- The search for effective schools and a quality education;
- The assurance of education standards and a quality education;
- The use of market forces and the balance between education equality and encouraging of competition to promote excellence;
- The privatization and diversifying of education;
- The shift to decentralization and school-based management;
- Emphasis on the use of development planning and strategic management;
- Parental and community involvement in school education;
- The use of information technology in learning and teaching;
- The development of new curricula and methods of learning and teaching;
- The changes in examination and evaluation practices;
- The search to enhance teacher quality; and
- The need for continuous professional development for teachers and principals

Aware of these education modifications and aiming to cover some of the challenges, UNESCO published, in 2014, two policy briefs for the East Asia and Pacific region. The first (UNESCO, 2014c) highlights two main problems in the region: lack of sustainable access to education among marginalized children and a commitment gap towards the educationally marginalized. The policy recommendation for designing an action strategy is to develop a framework for flexible learning strategies. Flexible learning strategies include flexible methodologies, intensive quality learning for literacy and numeracy, equivalency to formal education and lifelong learning.

The second volume (UNESCO, 2014d) tackles the subject of skills as a way to achieve holistic human development. In this document, UNESCO understands skills as a generic term to encompass knowledge, competencies, values and attitudes, and divides them into

three categories: foundation skills, specialized skills and transversal skills. This echoes the fact that this region comprises both, top performers in international assessments and very low rates of alphabetization or professionalization. UNESCO encourages Asian governments to develop adaptable, collaborative, innovative and enterprising systems, to more strongly align policies, curricula, pedagogies and assessment, and to place teachers as change agents.

Although Asian education continues to show clear facts of inequality, gender imbalance and privatization, Asian universities, mainly those in East Asia, keep rising in world reputation rankings. The World Reputation Rankings (Times Higher Education, 2014) includes, among the first 50 best universities, three Japanese, three Chinese (one from Hong Kong), one Korean and one Singaporean. While elementary education still lacks some basic resources, and some countries do not reach full attendance, higher education quality is rapidly rising.

It seems understandable that quality has become one of the main issues addressed by Asian societies. Regional initiatives to ensure quality include the Asia-Pacific Quality Network (APQN), with members from 53 countries in the Asia-Pacific region; the ASEAN Quality Assurance Network and the ASEAN Plus Three Quality Assurance Expert Meetings and the Chiba Principles of Quality Assurance, which offer guideline to both higher education institutions and quality assurance agencies related to recognition of qualifications, institutions, courses and programmes.

Certain initiatives specifically address qualifications, such as the Brisbane Communiqué or the Asia-Pacific Academic Recognition Network, which analyses and gathers information about foreign qualification recognition processed in 19 Asian countries, and the ASEAN Common Higher Education Area. Also in this region, qualification recognition has led to a strong tendency towards student and citizen mobility.

To cover contemporary needs and challenges, innovative education policies have been developed in most of the East Asian countries. To coherently articulate the policy framework and in consonance with both, the topic of the study and the European chapter, the next section focuses on Asian higher education, harmonization and mobility.

Harmonization and qualification recognition in Asian higher education

Tertiary education in Asia is not as harmonized as in the EU; nevertheless, enhancements and agreements among Asian countries are becoming common and are progressively acquiring a solid basis. Barnett (2012) analyses how the number of students attending institutions outside their country tripled worldwide between 1985 and 2008, with Asians representing 52% of the total. Owing to its large percentage, and their social and economic weight, student mobility is becoming a great concern in Asia, which in response is developing numerous mobility and harmonization projects.

Concretely in East Asia, a powerful triangle is emerging at the international level. In 2010, Japan, China and Korea launched a student mobility and recognition framework, the Collective Action for Mobility Programme of University Students (CAMPUS Asia). The trilateral agreement was modelled on the ERASMUS programme. The agreement signed by the three governments established certain guidelines for cooperation and exchange in tertiary education (Ministry of Education, Culture, Sport, Science and Technology Japan, 2010). This agreement was used as a reference when selecting CAMPUS Asia pilot programmes. The project started with exchanges in short-term degrees, and progressively expanded to double degree programmes, Master's and Doctoral students.

In this initiative, universities from the three countries agreed about specific programmes, such as the dual degree track, the triple degree track, language programmes or internships. The dual degree track lasts for two and a half years, and the students get two degrees (one from their home university after a year and another from a partner university after studied for another year) and one qualification (from the university where they spend the last half year period). The triple degree track lasts for three years, hence each university provides a degree after a 1-year programme. With both the dual and the triple degree track, students have the possibility to study in all three countries involved in CAMPUS Asia.

The National Institution for Academic Degrees and University Evaluation (2014a, 2014b) in Japan, details the ten pilot programmes started in 2010, such as the Beijing-Seoul-Tokyo Dual Degree Master's Programme on International and Public Policy Studies, carried out at the University of Tokyo, Peking University and Seoul National University and the programme for Degrees on Risk Management Experts in East Asia, developed at Kobe University (Japan), Fudan University (China) and Korea University. In these programmes, all universities accept credits from other universities and have set a common grading system.

Along with the initiative, in 2010, quality assurance agencies from the three countries (NIAD-UE[32] of Japan, HEEC[33] of China and KCUE[34] of Korea) launched the Japan-China-Korea Quality Assurance Council, and agreed to monitor education quality in CAMPUS Asia pilot programmes. The scope of the guidelines for the quality assurance involved all bodies working together, conducting exchange programmes and guaranteeing the quality of credits and degrees conferred. It also established core guidelines for governments (such as the establishment of a comprehensive, coherent and transparent quality assurance framework and encouraging relevant universities to participate in the exchange programme), universities (such as the establishment of internal quality assurance systems and offering good services for students), quality assurance agencies (such as maintaining clarification and visibility of procedures and seeking common standards and joint evaluation), and stakeholders (mainly referring to the participation and support of stakeholders from other fields in courses or internships).

In the same year, cooperation between these three countries became stronger with the Japan-China-ROK Trilateral Summit Trilateral Cooperation VISION 2020 (Ministry of Foreign Affairs of Japan, 2010) which determined specific goals and visions to be achieved through cooperation by 2020. Goals around sustainable economic cooperation, development, environmental protection, promotion of friendly relations, cultural exchange, promotion of regional and international peace and stability, were deepened in this agreement. Specially focusing on higher education, Article 4.4 states:

> "We will contribute to strengthening the competitiveness of universities and nurturing qualified human resources through exchange programs, such as credit recognition and joint degrees. To this end, we confirm that the China-Japan-Korea Committee on Promoting Exchange and Cooperation among Universities will be convened continuously. We will also promote cooperation among quality assurance agencies in China, Japan and Korea, and jointly prepare a guideline in order to enhance exchange among universities. Also, we will consider a concrete policy package to facilitate the exchange of prospective students. Meanwhile, to further

[32] National Institution for Academic Degrees and University Evaluation. Official site: http://www.niad.ac.jp/english/index.html [March 28, 2015]
[33] Higher Education Evaluation Centre Ministry of Education. Official site: http://www.heec.edu.cn/en/index.jsp [March 18, 2015]
[34] Korean University Accreditation Institute. Official site: http://aims.kcue.or.kr/eng/ [March 18, 2015]

promote trilateral educational cooperation, we will make full use of meetings to facilitate the establishment of a ministerial meeting mechanism. Moreover, we will promote the exchange of teachers among the three countries." (Ministry of Foreign Affairs of Japan, 2010, Article 4.4)

Cooperation was being expanded towards the countries in East Asia, and two years later, in July 2012, the ASEAN+3 Education Minister Meeting was officially held for the first time. This convention finally led to the adoption of the ASEAN+3 Plan of Action on Education: 2010-2017, where Member States showed their support in the educational field, and built a compromise to improve higher education quality. The intention to also promote CAMPUS Asia in the ASEAN countries was expressed, and other cooperation plans, such as the Work Plan on Enhancing ASEAN+3 Cooperation through Information and Media (2012–2017), were announced.

The progression towards a solid mobility programme continued and the second ASEAN+3 Education Minister Meeting, held in Lao in 2014, also promoted student exchanges and the need to raise higher education quality. Also in 2014, the 17th ASEAN+3 Summit took place in Myanmar, and countries particularly accepted contributing in the field of higher education, including promoting student exchanges.

These policies were also expanded thanks to the ASEAN Plus Three Cooperation Work Plan (2007-2017) signed at the 11th ASEAN+3 Summit held in Singapore in 2007. This plan assigned six specific education goals to work towards among the 16 countries (ASEAN Plus Three, 2007, p. 17):

- Encourage investments in education and training to accelerate learning opportunities for out-of-school children and youth and upgrade the quality of educational institutions, including human resources development for teachers, lecturers and administrative personnel.

- Promote collaboration, networking, research and development among institutions and authorities involved in education.

- Promote higher education cooperation, increase linkages among universities through the ASEAN University Network (AUN) and encourage credit transfers among universities in ASEAN Plus Three countries.

- Support research activities and exchanges of ASEAN Plus Three scholars and professionals interested in the ASEAN Plus Three relationship.

- Continue to make efforts to expedite visa application procedures for students and intellectuals of ASEAN Member Countries who travel to the Plus Three countries for academic purposes, in accordance with existing national regulations.

- Cultivate an East Asian identity through promotion of ASEAN Studies and East Asian Studies in the region.

Under the Work Plan, AUN created the ASEAN Credit Transfer System (ACTS). Like the European ECTS, this system includes student's workload as a total time, including classes, laboratories and autonomous learning. However, it does not require institutions to change their programmes, but gives a measure for conversion. In 2011, 26 higher education institutions in 10 Asian countries participated in and implemented the ACTS.

According to AUN, ACTS is a student-centred system, which takes into account the existing institutional and national credit systems for the expression and conversion of credits, study periods and learning outcome achievements, and is applicable to student mobility and exchange for up to a maximum of two academic semesters.

There is no official measure for the ACTS, however Japanese expert Taiji Hotta analysed thirteen Asian countries in 2010, and found some common trends. Hotta (2012) detected that university credits systems across Asia are very similar, and even if not all universities have already implemented the use of a specific kind of credit, conversion is almost unnecessary. He even uses the term "Asian common credit". Bachelor's degrees usually take four years, and are designed between 120 and 140 credits. In Asia is frequent to design education programmes in teaching hours, rather than student workload, and one credit means 13 to 17 teaching hours. The estimated student workload ranges from 40 to 50 hours per credit, including teaching hours, lab work, field work, etc. For example, in China workload hours range from 40 to 45, in Japan, Cambodia and Thailand the workload is 45 hours and Singapore 39 hours. Total credits per year frequently range from 30 to 35, hence total yearly hours usually range between 1,200 and 1,750.

According to the author's investigation, Asian evaluations use absolute grading rather than relative grades, though grading systems widely differ between countries, institutions and even departments of the same institution.

Besides ASEAN+3 and AUN, another body studies and promotes higher education harmonization in Asia, namely SEAMEO RIHED. SEAMEO stands for Southeast Asian Ministers of Education Organization and RIHED for its Regional Centre for Higher Education and Development. SEAMEO members are the same as ASEAN members, but the working partners belong to the education field. SEAMEO RIHED partners include Japanese, Chinese, British, Australian, European and international universities and organizations.

One of the main goals of this organization is promoting harmonization in the higher education systems of the region. Diverse mechanisms are being fostered to reach this goal, such as the establishment of a quality assurance framework, a credit transfer system and the design of curriculum contents. With this aim, SEAMEO RIHED (2012a), supported by the Asian Development Bank, launched in 2012 the project *Harmonization and Networking in Higher Education, Building a Common Credit Transfer System for Greater Mekong Subregion* (GMS) *and Beyond*. In 2014, this initiative was in its first phase, "explore", and planned to reach the second phase, "experiment", in 2015. The project aims to study national arrangements of credit transfer from policy-makers and experts, covering Southeast Asian countries: Cambodia, the People's Republic of China (Yunnan Province and Guanxi Zhuang Autonomous Region), Lao PDR, Myanmar, Thailand, Vietnam, Indonesia, Japan, the Republic of Korea and Malaysia.

Also in this programme a common credit system is proposed, the Academic Credit Transfer Framework for Asia (ACTFA). Initially 17 universities in the GMS region, from 6 countries participated. According to Kuruchittham (2013), Deputy Director of SEAMEO RIHED, to transfer courses from a country to another, at least 60% of the required classes should be equivalent. Credits will include class hours and self-study hours, and credit workload should range between 38-48 hours (or 13-16 teaching hours), excluding exam hours (SEAMEO RIHED, 2012b).

Another interstate programme in higher education in which mainly Asian countries are involved is supported by University Mobility in Asia and the Pacific (UMAP). In this case, members can be represented by government higher education departments, ministries or universities. Currently, 31 countries are members of UMAP, of which 25 are Asian. The countries include China, Japan, the USA, Russia, Singapore, Canada and Australia.

UMAP has developed a credit transfer system to facilitate mobility among the country members. The UMAP Credit Transfer Scheme (UCTS) is also based on the European ECTS; hence one full year is equivalent to 60 credit points, adaptable to two or three semesters. However, UCTS does not aim to change universities' regulations, but is used as a grading scale. According to SEAMEO RIHED (2012b), since 1993 when UMAP was founded, and while waiting for a regional credit transfer system, UCTS has been the agreed credit transfer systems for most Asian exchanges. Nonetheless the use of UCTS has been difficult to spread, since most universities have their own scheme for transferring foreign credits into their credit systems, and because of lack of knowledge on how implement UCTS and the complexity of using the scheme (Nguyen, 2009).

Teacher education and Asian guidelines

Asian teacher education guidelines are quite vague and unspecific, due to the fact that harmonization is still poor and key goals in many countries are still addressing the EFA project. The existence of several organizations covering the same topics, countries' often overlapping agreements and programmes, vast territories with highly uneven education standards, the lack of national and supranational consensus, and the absence of a strong comprehensive institution, make it difficult to generalize teacher education guidelines in Asia, without resorting to international organizations.

Since the EFA goals were designed to be met by 2015, a deeper assessment study is being prepared in all regions. UNESCO's (2013b) regional thematic consultation in the Asia-Pacific has detected some priority areas to build the strategy upon the post-2015 development agenda. With regard to quality of learning, teachers maintain a core role. Four of the seven main objectives are related to teachers, and two of them specifically to teacher education. The study highlights some ideas to tackle and build on during the next period: disparity in teaching pedagogy, as teachers still have hierarchical structures in mind and lack holistic approaches, teachers as central to learning, the need to address teaching students to learn how to learn, the need to ensure that teacher education equips teachers with the necessary skills and knowledge to improve learning, helping teacher education institutions to recognize teaching priorities, and curricular development based on the learning experiences needed by the students.

As a result, in 2014 the Bangkok Statement outlined six priority action areas for the region, including quality and teachers, lifelong learning for all, equity and equality, skills and

competencies for life and work, and information and communication technologies (ICT) for education and governance and financing (UNESCO, 2014e). Likewise, in the last decade, international organizations have promoted teacher education linkage to ICT competencies, sustainable development and lifelong learning in this region (UNESCO, 2005c, 2013b, 2013c; SACEP, 2014).

Also as a specific topic, Professor Kenneth Gannicott addressed secondary teacher quality in Asia in a report published by UNESCO in 2009. This analyses five case studies, China, Lao PDR, Malaysia, Republic of Korea and Thailand. As one of the final considerations (Lesson 9), it is highlighted that the tendency to produce a large number of trainee secondary teachers through open or only lightly restricted entry should be reversed. This report also confirms the fact that easy entry into teacher education programmes drives down the status and social attractiveness of secondary teachers.

Lately, another issue being taking into account in the region is teacher education as a cornerstone for dealing with differences such as multiculturalism or children with disabilities. IBE-UNESCO (2007) published an East Asia workshop on inclusive education, mainly analysing China, Japan, Mongolia and South Korea. In this matter, some good practices were detected and improvements were proposed. The challenges address the increment of teacher education and tolerance initiatives to implement inclusive education; the need for teacher education to strengthen the ways in which teachers understand, approach and respond to students' differences; and the revision and adjustment of teaching styles.

For teacher education and development IBE-UNESCO (2007) proposed seven recommendations (p.39):

- Develop and invest in pre-service and in-service training programmes to respond to the diverse needs of learners in schools. Incorporate inclusive education as part of the whole pre-service training programme instead of addressing it separately.

- Ensure that regular classroom teachers are trained to deal with diverse needs in the classroom with the support of specialized teachers.

- Provide comprehensive training for all educational personnel, including inspectors, social workers, etc. and create interdisciplinary support teams.

- Explore alternatives such as distance training, in-service training, head teacher training.

- Teacher training should also adapt to country-specific situations.

- Provide relevant incentives to teachers to be motivated for training.

- UNESCO should also provide information and teacher training.

As a general education study, the aforementioned UNESCO brief policy document about East Asia and the Pacific (Volume 2) was released in 2014. It stresses the fact that teachers are the key agents for spreading holistic human development and the relevance of teachers' quality as a crucial element for effective learning, and encourages policy-makers to ensure that teachers are well prepared, well supported and well incentivized. The study also detected that many classrooms of this region are still overusing traditional, teacher-centred teaching practices. Consequently, adjustments in Asian teachers' paradigms could include a shift from knowledge transmitters to facilitators, giving students a more active role.

UNESCO considers teachers as important role models; hence they are required to be equipped with solid pedagogical and subject-specific knowledge and transversal skills such as empathy, communication, leadership and teamwork. Keeping this statement in mind, policy-makers are encouraged to improve teacher preparation and recruitment.

SEAMEO (2014) has also tackled the post-EFA education agenda for the ASEAN[35] countries. The area of quality of learning specification is again strongly attached to teacher education. SEAMEO states the need to develop more comprehensive and systematic approaches to educating teachers, including the measures (p. 8): more careful selection of teacher candidates, better quality initial teacher education, placing good teachers where they are needed the most, improvement of induction and probation processes, and continuing professional development. It also highlights the need to ensure teaching is a first-choice profession, which requires raising status (standards and qualifications), salaries and benefits. It refers to standards again when stressing the importance of implementing more

[35] ASEAN countries do not include East Asia, however due to the increasing mobility exchanges, cultural similarities, economic partnership and the numerous references made to China and Japan, this document can offer a good idea about teacher education outlines in the region.

comprehensive competency standards for students and teachers, as well as assessment mechanisms.

This document also mentions ensuring environmental education for sustainable development in teacher education programmes, and establishes possible policy directions for future education development in the post-EFA agenda. One of its general objectives is expressly designed for teachers, and one of its specific objectives directly covers initial teacher education. The objective "Promote a serious, comprehensive reform of how teachers teach and how learners learn in order to enhance teaching-learning practices and promote a genuinely child-centered approach to teaching and learning" comprises teacher recruitment through field- and school-based pre-service training, in-school induction, mentoring, probation and continuing professional development. The specific objectives are (p. 21):

- Development of a standard teacher competency framework able to be used by teacher education institutions as the basis for their curricula and for the assessment of candidate teachers and by head teachers and supervisors in the mentoring, evaluation, and promotion (or not) of practising teachers.

- The systematic and comprehensive reform of pre-service training including:

    - A greater focus on content knowledge and an understanding of the fundamentals of lesson planning, questioning and feedback, differentiated instruction, effective peer work and problem-based approaches – all essential components of a child-centred approach to teaching and learning.

    - The essential skills linked to teaching in large classes, multigrade teaching, inclusive education, positive discipline, and teaching students whose mother tongue is not the language of instruction.

    - A much greater focus on making both pre-service and in-service education and training more practical, localized, and field- and school-based.

- In support of such reforms, a strengthened quality assurance system including a better system of head teacher and supervisor/inspector selection and training, a

more effective school cluster system, and, in a decentralizing system, stronger district-level offices.

- A strengthened school cluster and/or school family system to ensure that it promotes better classroom practice.

To deepen the topic of teacher education in East Asia, it is essential to describe the proposals made by the International Consortium for Universities of Education in East Asia (ICUE). This body was officially formed in 2009, after a consolidation process which began at the 2006 International Symposium on the Teacher Training System in East Asia (which later began the ICUE teacher education symposiums).

Specifically focusing on both areas, teacher education and East Asia, ICUE's goals are to assure the quality of teacher education of general teachers, educational leadership and teacher educators in universities in charge of general teacher education and educational leadership education. ICUE also takes responsibility for the abovementioned CAMPUS Asia project.

International teacher education symposiums are organized every year on a rotating basis between China, Japan and South Korea, and every month an activity report on promoting international strategies is released. Proposals on teacher education and teacher quality address multiple issues and results are expressed in research plans on teacher education. Teacher education topics and concerns expressed by East Asian education experts include:

- The East Asian/European-American conflict when describing the concept of teacher and education.

- The fact that Asian institutions, influenced by the process of globalization, are accepting the Anglo-Saxon concept in their higher education institutions, which is leading to conceiving of any other type of accreditation or assessment systems as deviations or not normal.

- The importance of the influence of Confucianism in teacher education in Asia.

- The difficulty for East Asian people to establish evaluation standards for teacher education within the context of their concept of teacher.

- The need to develop programme designs and quality assurance systems for teacher education deep-rooted in the East Asian concept of a teacher and to

establish some international currency graduate programmes for teacher education common to universities of education in East Asia.

(Tanaka, 2011)

- Bringing schools and universities closer to offer a coherent curriculum.
- Providing teacher education in line with the latest trends of ICT so they will be fully prepared to identify information literacy.
- Directing teacher education to cover students' new demands, detecting violence in schools and dealing with multicultural family backgrounds and academic underachieving.
- Teacher education for different regions, and forms of education such as gifted or handicapped children.

(Suh, 2012)

- East Asian countries to develop an effective assessment system and coordination among agencies (government and university criteria). Highly itemized criteria may prevent teachers having autonomous thoughts and taking decisions according to the context, and general guidelines may not be effective.
- Historical conflict between academic-orientated and practical-orientated arose, suggesting countries reflect on the best combination.
- Balance between academic freedom sought by universities and the need for nationwide quality control pursued by governments.
- Identity crisis of school teachers due to marketization of education.
- Difficulties in collaboration matters since teacher education is a domestic matter, there is a very competitive environment among universities, universities of education and normal universities. Lack of international collaborative research.
- Need for a competency framework, with more non-manual competencies than itemized and packaged manual skills.

(Iwata, 2011 and 2014)

China, as an East Asian country, shares many of these concerns, such as the difficulties dealing with a large population, extended rural areas and lack of qualified teachers. As a consequence, it has put forward numerous policies, which are addressed in the next section.

4.1.5. EDUCATION IN CHINA

4.1.5.1. GENERAL EDUCATION LEGISLATION AND GUIDELINES

The Ministry of Education of the People's Republic of China (MOE) is the first responsible body to formulate education policies[36], which are later developed by regulations. National legislation is settled by the central government with the advice of the Ministry of Education, the highest administrative authority in China's education. The provincial, prefectural and county levels have their own education departments responsible for the implementation of education laws. Legislative application, education guidance and assessment are shared among the different administrative levels.

Education is centralized, therefore managed through the regional delegations of the Ministry of Education under a tight supervision of a central body. According to Article 14 of the Education Law of the People's Republic of China, junior and senior secondary education shall be managed by the local governments (often at county level) under the supervision of the State Council, while higher education is often directly managed by the State Council alongside the governments of the province, autonomous region or municipality directly under the central government. All policies are subordinated to the general education laws.

Because of the correlation between general legislation, provincial governments' administrations of the laws and higher education, this section explains the main national legislations:

- <u>General and secondary education</u>

- Constitution of the People's Republic of China (1982). 中华人民共和国宪法. (Chinese National People's Congress, 1982)

[36] However, the Ministry of Education does not formulate legislation. This responsability belongs to the Congress.

- Compulsory Education Law of the People's Republic of China (1986). 中华人民共和国义务教育法. (MOE, 1986)

- Education Law of the People's Republic of China (1995). 中华人民共和国教育法. (MOE, 1995a)

● Higher education

- Regulations on academic degrees of the People's Republic of China (1980). 中华人民共和国学位条例. (MOE, 1980).

- Higher Education Law of the People's Republic of China (1998). 中华人民共和国高等教育法. (MOE, 1998)

● General laws and orders on teacher education

- Teachers Law of the People's Republic of China (1993). 中华人民共和国教师法. (MOE, 1993)

- Teachers' training institutions work order (1996). 高等学校教师培训工作规程. (MOE, 1996a)

General and secondary education

- Constitution of the People's Republic of China (1982)

The Constitution of the People's Republic of China was adopted on 4 December 1982, further modified in 1988, 1993, 1999 and 2004. In it, besides the preamble, where education is listed as an example of the progress made by the Communist Party of China under the guidance of Marxism-Leninism philosophies and Mao Zedong, another eleven articles directly mention education.

Regarding responsible bodies, the Constitution establishes an Education, Science, Culture and Public Health Committee (Article 70), which has the power and duty to examine, discuss and draw up relevant bills and draft resolutions under the direction of the National People's Congress and its Standing Committee. It also gives the State Council the power to

"direct and administer the work concerning education, science, culture, public health, physical culture and family planning" (Article 89).

The administrative work concerning education relies on local governments, or organs above the county level (Article 107), while the organs of self-government of the national autonomous areas independently administer their educational affairs (Article 119). According to the directives expressed in the Constitution, the administrative organization of Chinese education is shown in Annex 2. These directives were later confirmed and detailed in the Compulsory Education Law.

Several references in this major law connect education to socialist and communist values and ideology, such as Article 19: "The State develops socialist educational undertakings and works to raise the scientific and cultural level of the whole nation" or Article 24, "The State strengthens the building of socialist spiritual civilization". Moral values are traditionally a keystone for Chinese education and society, as remarked by several legislation and articles. Article 24 also links education with high ideals and morality, general education and education in discipline and the legal system, as well as civic virtues, considering love for the motherland, for the people, for labour, for science and for socialism, patriotism, collectivism, internationalism and communism, and dialectical and historical materialism.

In China, religions and philosophies are clearly differentiated, hence along with these political philosophies, Article 36, "Citizens of the People's Republic of China enjoy freedom of religious belief", protects people from religious discrimination and separates the educational system of the State from religious activities. The right and the obligation of receiving education, including moral, intellectual and physical development of children and young people, is undertaken in Article 46, "Citizens of the People's Republic of China have the duty as well as the right to receive education".

Education for people with disabilities is also guaranteed by the Chinese Constitution. Article 45, "Citizens of the People's Republic of China have the right to material assistance from the State and society when they are old, ill or disabled", states that both the State and society should help to make arrangements for the work, livelihood and education of the blind, deaf and other citizens with disabilities.

In order to tackle illiteracy, which was still widespread at the of signing this law, and to provide education (political, cultural, scientific, technical and professional) for working

people, Article 19 declares the existence of different types of schools and educational facilities ruled by the State. It also encourages economic organizations and State enterprises to set up educational institutions. It supports compulsory and universal primary education, and promotes secondary, vocational, higher and early childhood education. In this article, education through self-study and the nationwide used of Putonghua (standard Chinese) are also promoted.

- Compulsory Education Law of the People's Republic of China (1986)

Since junior secondary education is part of basic education, meaning it is compulsory and free, this law is the main national reference for this stage. It was adopted at the Fourth Session of the Sixth National People's Congress on 12 April 1986; this law was released only two years after the Constitution, and was later amended on 29 June 2006. It assigns the State Council as responsible for designing the overall planning for compulsory education, later implemented in provinces, autonomous regions and municipalities directly under the central government. Education is mainly administered by governments at the county level (see Annex 2).

Again, full development (moral, intellectual and physical) is mentioned alongside well-educated and self-disciplined builders of socialism with high ideals and moral integrity (Article 3). The act also covers resources distribution for ethnic minorities, rural areas and disadvantaged families.

The main milestone of this law was the adoption of the 9-year system of compulsory and free education for all Chinese children, regardless of their gender, economic status or race (Articles 2, 4 and 25 and Chapter VI). Article 2 gives the State responsibility for guaranteeing universal access to this level, although Article 5 stresses the role of families to ensure that school-age children go to school and receive a complete compulsory education, and the importance of schools ensuring education quality.

The second chapter focuses on the students, and establishes that compulsory education starts from age 6, or age 7 when conditions do not allow starting at the general age. It states that no examination can be taken before the end of compulsory education (no examination which could have as a result expulsion or preventing students from being in the educative system), and forbids any employing entity to hire school-age children.

The legislation highlights Government responsibility to set up, when necessary, classes or schools to enrol school-age children of ethnic minorities, with disabilities or for juvenile delinquents. Besides this, Government shall not divide schools into key schools and non-key schools, and schools may not set up key classes and non-key classes. As a result, key schools start in senior secondary education, as addressed in the next section.

Article 35 gives the State Council responsibility for determining the teaching system, the educational and teaching content and the curricula, reforming the examination system, improving measures for recruiting students by senior middle schools, and implementing a quality-orientated education.

China has strict control over content, not only in compulsory education, but in national information. This law stresses that the resources to cover the curriculum should be in accordance with the national education policies and standards, and school shall place moral education at first priority. According to this law, the State Council examines and approves textbooks, and it is forbidden to publish or use any textbook that has failed to be examined and approved (Articles 36 to 39).

Chapter IV (Articles 28 to 33) is specifically centred on teachers, and indicates that teachers shall be worthy of the name "teacher", which itself indicates high esteem for the profession, confirmed by the fact that teachers should be respected by the whole of society (Article 28). Teacher education is mentioned in Article 32, giving county governments responsibility for developing the education of teachers and organizing their training (see Annex 2).

This chapter also makes reference, for the first time in Chinese modern history, to teachers' qualifications prescribed by the State. The State is in charge of the establishment of a uniform system for professional qualifications, classified into primary, intermediate and senior qualifications (Article 30). It also addresses teachers' salaries, stating, "The average salaries of teachers shall not be lower than the average salaries of the local civil servants" (Article 31), and the State's duty to offer welfare benefits, social insurance and subsidies for special posts or conditions (special education, ethnic minorities or poverty-stricken areas).

- Education Law of the People's Republic of China (1995)

Since there is no specific legislation for senior secondary education, this law is the national legislative reference for that level, while it also covers the preceding stage, junior secondary education. This general education law was adopted at the Eighth National People's Congress on 18 March 1995, and became effective the same year on 1 September. It aims to improve education quality statewide under a Chinese socialist ideological position. Main values, such as Marxism-Leninism, Mao Zedong Thoughts, socialism with Chinese characteristics, morality, intelligence and physique for the socialist cause, patriotism, collectivism and socialism as well as ideals, ethics, discipline, legality, national defence and ethnic unity, already included in the previous legislations, are reiterated.

Other reiterated characteristics are respect for teachers, the divorce between education and religion, the right and duty to be educated under parameters of equality and quality, and the use of Chinese language in schools and other educational institutions. However, the legislation also guarantees the use of ethnic minority languages when the region or the majority of the students' native language is other than Chinese.

Article 14 gives local governments, under the leadership of the State Council, responsibility for managing secondary and lower education, while higher education is managed by the State Council and the government of the province, autonomous region or municipality directly under the central government (see Annex 2).

This act also affirms the strategic importance of education in economic and social development and guarantees the reform and development of education, coordinating all kinds of education at all levels. Levels are defined in the second chapter, "Basic education system", as early childhood school education, primary education, secondary education and higher education (Article 17). The State also takes responsibility for adopting a vocational education system, an adult education system, a national examination system of education, and an academic degree system.

As in the Compulsory Education Law, Chapter IV is dedicated to teachers and other educational workers. Besides emphasizing the rights and obligations already mentioned, this law refers to the protection of the rights and interest of teachers, and increasing their social status (Article 33). It also stresses the need to settle a qualification-based and professional skills-based post-employment system, and to "improve the quality of teachers and strengthen

the development of teachers by way of examination, rewards, cultivation and training" (Article 34).

Higher education

- Regulations on academic degrees of the People's Republic of China (1980)

This regulation was adopted at the 13th Meeting of the Standing Committee of the Fifth National People's Congress on 12 February 1980, and went into effect on 1 January, 1981. It was amended in 2004.

The main contribution of this legislation was the division of academic degrees into three grades, Bachelor's degree, Master's degree and Doctor's degree (Article 3). It also establishes the requirements and objectives of all of them, as well as the responsibilities and characteristics of the institutions where they can be taught.

The profile for Bachelor's degree programmes, where nowadays secondary teacher education generally takes place, is defined in Article 4. This qualification is given to graduates from higher education institutions with good academic records which have accomplished the required academic standards: having a good understanding of basic theories, specialized knowledge and basic skills in the discipline concerned, and having acquired the initial ability to undertake scientific research or to engage in a special technical work. Master's degrees are explained in Article 5, which places more emphasis on scientific research skills and the defence of a dissertation. Institutions which wish to offer both Bachelor's and Master's degrees should be authorized by the State Council (Article 8).

- Higher Education Law of the People's Republic of China (1998)

Approved at the Fourth Session of the Standing Committee of the Ninth National People's Congress on 29 August 1998, this law has been effective since 1 January 1999, and enhances all of the above philosophies focusing on higher education. According to Articles 2 and 68, higher education refers to education conducted after the completion of senior secondary education, namely universities, independent colleges, and specialized higher education schools, including higher vocational schools and higher education schools for adults. The State is responsible for formulating the development plans of higher education, running higher education institutions and promoting higher education (Article 6). Since it

does not belong to compulsory education, higher education is not free, and students shall pay the tuition fees regulated by the State (Article 54).

Higher education includes education for academic qualifications and education for non-academic qualifications, and full-time schooling and part-time schooling. If higher education has the purpose of offering an academic qualification, there are three kind of courses: special course education, regular course education and graduate programmes.

Special courses mainly focus on basic theories and special knowledge to acquire the basic skills and the preliminary ability to do practical work, and last between 2 and 3 years. Students at this level are called special course students. Regular courses demand a deeper knowledge, which should lead to the acquisition of basic skills and methods to obtain ability to do practical work and research. The length is between 4 and 5 years. Students in this stage are called undergraduates. Graduate programmes refer to two types of students, Master's degree (2 to 3 years) students also known as candidates working for a MA Degree, and candidates working for a PhD (3 to 4 years), where theories, skills, methods, relevant knowledge, and practical work and research are required (Articles 15 to 19).

Teaching programmes, teaching materials and teaching activities are drawn up by higher institutions (article 34). Nonetheless, as in preceding levels, the "State adopts preferential policies with regard to the books and other material and equipment for teaching and research imported by higher education institutions and to the industrial undertakings run by such institutions" (Article 63).

Teachers are subject to a qualification system. Both undergraduates and graduates, as well as specialists in a field without undergraduate or graduate qualification but who have passed a national examination for the qualification of teachers, are consider qualified to teach in higher education institutions (Article 46). Higher education institutions' professional levels for teachers are: teaching assistant, lecturer, associate professor and professor (Article 47).

Assessment of teachers in higher institutions is also stressed in Article 51. The assessment includes the ideology, political performance, professional ethics, professional skill and actual achievements of teachers, administrative and managerial personnel, using this valuation as a basis to promote, dismiss, reward or penalize teachers or other professionals.

General laws and orders on teacher education

- Teachers Law of the People's Republic of China (1993)

This general legislation to regulate the teaching profession was approved on 31 October 1993, and became effective on 1 January 1994. It was the first official law for teachers and the teaching profession since 1949 (Hu, 2014). It introduces specific measures regarding teachers' qualification and education and teachers' rights. It refers to teachers at all levels and education institutions, and defines teachers as "professionals who exercise the functions of education and teaching and are charged with the duty of imparting knowledge and educating people, training builders and successors for the socialist cause and enhancing the quality of the nation. Teachers shall devote themselves to the educational cause of people" (Article 3).

Like the Compulsory Education Law, this act encourages all members of society to respect teachers, and government to improve teachers' status, life and working conditions. It also designates 10 September as Teachers' Day.

This law stresses teachers' main rights, including the right to conduct educational and teaching activities, to engage in scientific research and academic exchanges, to join professional academic societies, to fully express their opinions in academic activities and teaching, and the right to make suggestions to improve education; the right to give guidance and evaluate students, to obtain salaries and remunerations on schedule, to enjoy welfare benefits and to take further training.

It also tackles teachers' obligations (Articles 7 to 9). As responsibilities, besides respecting and implementing Chinese general laws, policies, teaching plans and ethics, teachers shall improve their teaching competencies and be committed to loving and protecting students' dignity and rights, while increasing students' ideological and political consciousness. The government, to assure this process, will provide educational and teaching equipment according to the safety standards set by the State, including books, materials or articles.

As for benefits (Articles 25 to 32) the legislation reaffirms teachers' salary level, according to what the Compulsory Education Law established, as equal to or higher than State public workers' salaries, and to be gradually raised according to a system of promotion. Like State public employees, teachers get equal medical care, regular health check-ups, recuperation holidays and pensions. Teachers shall also have allowance benefits, mainly those teaching in regions inhabited by ethnic minority groups or in poverty-stricken areas. Priority and preferential treatment is given to teachers when renting or selling houses in urban areas, and

in rural areas, government at the county or township should help teachers to solve housing difficulties.

One of the bases of this regulation is the establishment of a qualification system. Teachers can access the profession by acquiring a degree according to the level at which they wish to teach, or passing a national teachers' qualification exam, in which educational and teaching abilities are assessed. According to Article 11, teachers for junior secondary schools should obtain at least a higher normal school qualification or other college or university with a two or three-year programme, and teachers for senior secondary schools should have graduated from normal colleges or other colleges or universities with at least four years' schooling. Nonetheless, nowadays most programmes for both junior and senior secondary teachers take place in normal universities in 4-year programmes.

Other principles established by the law (Articles 12 to 17) are the evaluation and endorsement of the qualifications by the administrative departments of education under local governments or above the county level, and the establishment of a probation period for teachers who recently obtained their qualifications. Along with the qualifications as a requisite to enter a professional teaching career, a system of professional degrees shall be promoted by the State. The professional degrees are often linked to the assessment results of teachers' political awareness and ideological level, professional competence, attitude towards work and their performances. Teachers' salary rises, rewards and penalties are also related to these assessments.

- Teachers' training institutions work order (1996)

The major arrangements for teacher education institutions are detailed in this legislation. On the basis of this law, teacher education universities and colleges are under the administration of the Department of Education of the State Council. It determines general guidelines for initial teacher education, including legislation, policies and psychology and teaching practices (more than 3 months), as well as the requisites to apply for Master's degrees and in-service training. It also underlines the role of teaching and institution assessment, and teachers' research and development.

4.1.5.2. EDUCATION AND FUTURE GUIDELINES

- China's 12th and 13th Five-Year Plans.

Every five years, the Chinese government launches a series of social, political and economic initiatives. The plans include strategies to reach multifocal development for the next five-year period, based on the assessment of the previous plan. In October 2010, the Communist Party Central Committee approved China's 12th Five-Year Plan for National Economic and Social Development (2011-2015) (National People's Congress, 2010). The next Plan was launched in 2016, designing the guidelines from 2016 to 2020.

In the 12th Five-Year Plan, the government focuses on inclusive growth, mentioning education as one of the nine key priorities related to public services. The main reference to the education field is linked to technology, the need for higher education reform in science and technology and talent recruitment, increasing investments in human capital and the intention to encouraged highly educated overseas Chinese to return to China.

The scope for education is to continue implementing the 9-year compulsory education free of charge, to give access to compulsory education to the children of migrant workers, as well as continuity to middle school and high school. The importance of strengthening children's elementary and social behaviour education is stressed alongside fee exemption (accommodation, secondary vocational education and orphaned and disabled children to receive pre-school education), for families with no resources or in rural areas.

Also the 13th Plan aims to offer better education and to guarantee the access to compulsory education for all children, improving the quality of education and to bridge the urban-rural gap. The Chinese Government is directing its policies to promote a universal and free of charges senior secondary education for poor students, to improve the quality of higher education, to include some universities in the global top-ranking, and to encourage the private sector to invest and provide diversified education services.

- China's National Plan for Medium and Long-term Education Reform and Development (2010 -2020).

In this document (MOE, 2010a), the Chinese Government details its educative purposes for the decade 2010-2020. The strategic goals to be attained by the end of this period are related to the modernization of education, improvement of the learning society, and the intention to turn China into a country rich in human resources. The proposal revolves around five strategic goals, summarized as:

- Further Popularize education:
    - Universal early childhood education.
    - Consolidation and enhancement of the 9-year compulsory education.
    - Raise the number of students in senior secondary school to a 90% gross enrolment rate.
    - Raise the number of students in higher education to a 40% gross enrolment rate.
    - Eliminate illiteracy among the young and middle-aged.
    - Raise the average number of years of education from 12.4 to 13.5.
    - Double the 2009 percentage of the working-age population (20-59 years old) in higher education, reaching 20% by 2020.
- Delivering equal education to everyone:
    - Keep education as a public welfare-orientated resource.
    - Equal access in both urban and rural areas, narrowing regional disparities.
    - Improve education access and quality for rural migrant workers' children, children with disabilities and low-income families.
- Offering quality education in various ways:
    - Quality linked to modernization and high-quality resources.
    - Improve ideological awareness, moral conduct, scientific and cultural attainment and physical health.
    - Improve professional capabilities in all fields, to take part in global competition.
- Building a consummate framework for lifelong education:
    - Develop diploma and a non-diploma education.

  - Modernize the lifelong learning education framework where everyone can be taught what they want to learn, excel at what they learn, and put what they have learned into use.

  - Connect vocational and regular education, and pre-job and on-the-job education.

  - Raise the rate of participants in continuing education, reaching 50% of job-holders.

- Establishing a full-fledged, vibrant education system:

  - Update concepts and deepen educational reform to cover social needs in consonance with the socialist market economy.

  - Education system should be efficient, open, and well adapted to scientific development and the requirements to run world-class modern education with Chinese features.

The major goals for 2020 related to junior and senior secondary schools aim to reach 165 million children (95%) in compulsory education, and 47 million students (90%) in senior secondary school. Compulsory education is strongly linked to teacher quality, as the document associates the universalization of compulsory education with the improvement of teaching quality. The plan stresses the improvement of teachers' quality, their teaching methods and efficiency as an imperative for the decade. It also connects teachers' credentials and proficiency levels, education standards and national curriculum standards.

The first chapter of the fourth section, under the title "Guaranteeing Measures", specifically focuses on teachers, through five key themes: building a vast contingent of quality teachers; promoting professional ethics among teachers; raising teachers' professional efficiency; heightening teachers' social status, salaries and benefits; and, streamlining administration of teachers.

These five topics emphasize the essential need to improve teachers' status, protecting their rights and interests, and raising their salaries and benefits (including performance-based salaries), while carefully and strictly ensuring teachers' credentials. The measures also aim to turn teaching into a respected occupation, carry out by highly ethical and responsible

professionals. As a consequence, the working, learning and living conditions of teachers should be ameliorated, attracting better candidates to teach in schools.

The path to this ideal situation is considered to be forged through teacher education improvement, drawing up good plans to allow the cultivation and training of teachers, and optimization of their academic and pedagogical proficiency. Reforms will be in line with the renovation of education, fieldwork and practical activities will be intensified and teachers' ethics and instruction upgraded.

The enhancement of the teacher education system shall be funded by government budgets, and reforms shall deepen into an open and flexible construct. Normal universities will have the main role in these reforms, though comprehensive universities can also get involved. The plan also proposes that normal universities progressively become free of charge.

Teachers are also entitling to participate in academic exchanges and to have financial assistants to carry out research projects. Lifelong education is also considered as a basis of teacher education. The plan determines that teachers shall undergo training every five years.

Teacher in primary and junior secondary education shall register their credentials after passing a unified examination and obtaining a certification. This process will be organized by the education administrative departments at the provincial level. The process of recruitment, employment, accreditation, training and assessment for both primary and junior secondary school teachers will be organized by the county-level education administrative departments.

The Plan also details a series of initiatives to be undertaken during the period 2010-2020. One of those projects, namely *Training Qualified Teachers for Compulsory Education*, targets equality between rural and urban teachers, and the recruitment of teachers for under-staffed disciplines. It also anticipates the need to give more training to compulsory education teachers, while carrying out research and study programmes.

4.1.5.3. SYSTEM OVERVIEW

The Chinese education system is mainly regulated by the two above-explained education legislations, the Education Law of the People's Republic of China (1995) and the Compulsory Education Law of the People's Republic of China (1986), which determine the structure and characteristics of the actual organization.

Currently, China's education is divided into early childhood education, primary education, junior and senior secondary education and higher education. Nowadays basic education consists of primary and junior secondary education, summing up the 9 years of the compulsory education period. These two stages can be organized in a 5+4 or 6+3 system. Shanghai's compulsory education system follows the 5+4 path.

The complete structure is as follows: a 3-year period for early childhood education, a 6- or 5-year period for primary education, a 3- or 4-year period for junior secondary education, and a 3-year period for senior secondary education. After senior secondary education, students go through a selection process to enter a higher education institution. Regular universities usually offer 4- or 5-year Bachelor's programmes (undergraduate), 2- or 3-year programmes for Master's, and 3- or 4-year programmes to obtain a PhD (both considered graduate).

Non-compulsory education often starts at age 3, when parents decide whether to send their children to early childhood education or wait until age 6, when primary and compulsory education begins. There are three types of early childhood institution (Vaughan, 1993): nurseries, kindergarten and pre-primary programmes. Nurseries take care of children younger than 3 years, and teachers are trained as nurses more than educators. In contrast to nurseries, in kindergarten and pre-primary education children are generally grouped by age. Government regulations in 1981 already recommended three groupings: junior (3-year-olds), middle (4-year-olds) and senior (5-year-olds) (Cleverley, 1985). Pre-primary programmes are carried out one year before children start primary school, and their main objective is to prepare children to enter compulsory education.

The regulation to which Cleverley was referring is the first *National Curriculum Guideline*, which dates from 1981. Its core components are related to educational goals and children's development characteristics, curriculum areas and objectives, and teaching strategies and important issues (Staples New and Cochran, 2006). A second National Curriculum Guidelines for early childhood education came out in 2001 (MOE, 2001a), under the title *Guiding Framework for Kindergarten Education*.

The order was framed into two regulations affecting early childhood development, the *Procedural Regulations for Kindergartens* (1989) and the *Kindergarten Work Order* (1996b), which was revised in 2013 (MOE, 2013a). According to both regulations, for children aged 3 to 6,

education principles should combine care and education and include different types of education such as full-time, part-time, regular, seasonal boarding or mixed systems.

The number of children per group, as stated in the 2013 work order, depends on the level; 25 students are recommended for junior classes (小班), where children are between 3 and 4 years old, 30 students for the middle class (中班) where children are between 4 and 5 years old, and 35 students in senior classes (大班), where children are between 5 and 6 years old. Teachers should have the degree required by the national legislation.

As a result of various dynamics in early childhood education promotion, the UNESCO Institute for Statistics noticed an increment of 22.6% in 6 years, reaching an enrolment rate of 69.9% in 2012 (UNESCO Institute for Statistics, 2013). According to MOE's National Statistical Bulletin on Education Development (MOE, 2013b), in 2013, the pre-primary, referring to the preparatory level before compulsory education, gross enrolment rate reached 67.5%, increasing 3 percentage points from 2012.

Still, UNESCO-IBE (2011) stresses the differences between urban and rural areas (where the children-teacher ratio can reach 55:1), as well as the imbalance between central and western regions and eastern regions. With the intention to cover these needs, the Chinese Government assured that China will keep building pre-school facilities and increase support for private early childhood education centres, as well as enhancing teacher training and providing subsidies for rural families (Greubel and Van der Gaag, 2012).

The next levels, basic education (including junior secondary school), show a higher attendance rate nationwide. The MOE's measurements (2013b) estimate a 9-year compulsory retention rate of 92.3%. For primary school, MOE affirms, a net enrolment rate of 99.71% (99.70% for boys and 99.72% for girls) has been reached. At this level, 99.83% of full-time teachers are qualified according to legal requirements and the student-teacher ratio has decreased from 17.36:1 in 2012 to 16.76:1 in 2013.

However, owing to the large number of inhabitants and deep economic inequalities, this information may not be, as with any average, precisely accurate for all regions and social stratums. A large gap between rural and urban areas and among regions is maintained. According to official facts, by the end of 2007, two of the core national objectives, universalizing the 9-year compulsory education and eliminating illiteracy among young

people and adults, were still not fulfilled in 42 counties in West China (MOE, 2008 cited in UNESCO-IBE, 2011).

The main body responsible for planning and deciding about national school curricula is the Ministry of Education. According to the *Teaching Scheme (Curriculum) for Full-time Primary and Secondary Schools (Trial),* published in 1993 (MOE, 2004a), responsibility for curriculum design is shared between national, provincial and local governments. There are two kinds of subject: state-arranged and local-arranged. The latter are designed according to the provincial guidelines, and should be adapted to the reality of the local context. The *Teaching Scheme* introduced and implemented primary and junior secondary education curricula including lesson plans and curriculum subjects.

Since then, other acts have been launched, such as the *Decision on Basic Education Reform and Development* (Chinese State Council, 2001), the *Compulsory Education Curriculum Experimental Programme* (MOE, 2001b) and the *Compulsory Education Curriculum Standards* (MOE, 2011a). These three documents introduced basic education curriculum reform including curriculum management, construction materials, curriculum distribution, etc. Besides establishing the areas to offer in compulsory education, some advice for elective classes in secondary education was included, such as the establishment of foreign language classes, additional ICT education classes and comprehensive practical activities.

In line with the official curriculum, the National Centre for School Curriculum and Textbook Development (NCCT) was created in 1998. Among other objectives, it assesses and develops elementary, junior and senior secondary education curricula. The NCCT is the only Chinese accreditation agency and is also engaged in nationwide studies. It develops and assesses professional performance, school curricula, textbooks, and the implementation of foreign and international education centres.

According to the MOE (2004a), a system of control over education material has been established to assure teaching materials' quality. Textbooks and school materials shall respect State regulations, and primary and secondary school textbooks are to be audited by the National Commission. Ideological, scientific and educational aspects are reviewed. Once materials are approved, provincial committees can choose their materials, which will later arrive in local primary and secondary schools.

In some provinces, at the end of primary school children take a final examination, mainly focusing on Chinese language and mathematics. They are also tested in other subjects, as check-up examinations; therefore, other subjects do not have an academic impact. Since junior secondary education comprises basic and compulsory education, some provinces do not assess their pupils at the end of primary school or use marks as a check-up system.

Exams are a very important part of Chinese education. For instance, at the end of junior secondary education, besides the graduation exam, pupils must pass an entrance examination to continue to senior secondary school. The Senior Secondary School Entrance Examination is commonly known as Zhongkao, but is named differently in some provinces. The Ministry of Education establishes the guidelines for this examination, but provincial education departments make them concrete for their province. Generally, in this process, the responsible body for the test is at provincial or municipality level, however in some provinces this task is assigned to prefecture-level cities. Different provinces have different exams, though usually Chinese, mathematics, a foreign language, political, ideological and moral education, physics, chemistry, history and sports components are assessed.

In the 1980s, the Junior Secondary School Graduation Exam and Senior Secondary School Entrance Examination were unified. If students could not pass the exam, they were considered as non-graduated from junior secondary school and without the possibility to access senior secondary education. As a consequence, in some provinces, many students were left behind without obtaining a compulsory and basic education diploma. Hence, since the early 1990s, some provinces started to administer graduation and entrance exams separately. At the present time this is not the case in Shanghai, which maintains a 'two-in-one test' system.

In 2015, according to the Shanghai Municipal Education Commission (Shanghai Municipal Education Examination official website, 2015), the unified test subjects assessed were language (150 points), mathematics (150 points), foreign language (150 points), physics (90 points), chemistry (60 points) and sports (30 points). The maximum official score is 630 points. Physics and chemistry skills and experiments are also examined, up to 10 points, which are not included in the final grade, but express as qualified or unqualified. The other subject not included in the final grade is moral character, which is measured out of 100 points, and officially transcripted as excellent, good, qualified or unqualified. The grade in moral

character, even though not part of the official score, is often taken as an important reference for entry to high-quality senior secondary schools or key schools.

The tests are planned to be taken between April and June. The exams in Chinese language, mathematics, and physics and chemistry last 1 hour 40 minutes each, while English language lasts 1 hour 45 minutes and moral character 1 hour 10 minutes. The final grade of the exam is the principal component for being chosen by a senior secondary school, or it can motivate students to go to technical or vocational secondary schools.

The grade in the Zhongkao is the main requisite for entering senior secondary education, and senior secondary key institutions choose their candidates according to the best results. For instance, in 2013, the best key high schools' admissions in Shanghai started at 602.5 points for the high school managed by Fudan University, the two high schools affiliated to East China Normal University started at 598.5 points, while its two high schools in Minhang district started at 596 points. Jiao Tong University also required 598.5 points to enter its associated high school, and Shanghai High School required 598 points (Sina, 2013).

Senior secondary education covers the next three years, and is not compulsory or free. Since 2004, the senior secondary curriculum has been organized in a credit-based system, and students must complete a minimum of 144 credits and a maximum of 180, out of which 116 credits are compulsory subjects and 28 credits elective subjects. Most students take compulsory courses in the first year, and a combination of compulsory and elective courses in the second and third years. The third year mainly focuses on preparing students for the National University Entrance Exam, commonly known as the Gaokao.

However, the National University Entrance Exam is not the only evaluation scholars sit during senior secondary school. Before this, they also have to sit the High School Academic Proficiency Test, commonly referred to as the Senior Secondary School Exam. On passing this examination, students obtain an official diploma and can move forward to the next educative level or institution. If they do not pass the evaluation and do not take it again, they obtain a certification. In some provinces, from the end of the second year students can choose to be assessed in all subjects except Chinese, mathematics and foreign language, the assessment of which is required to take place in the last year.

In Shanghai, the exam is called the Shanghai High School Proficiency Exam, and is planned according to the *Notice about Shanghai High School Proficiency Exam Implementation*

(Shanghai Municipal Education Commission, 2009a), the *Ordinary High School Proficiency Exam Implementation Rules (Trial)* (Shanghai Municipal Education Commission, 2009b) and the *Announcement on Improving High School Proficiency Test System* (Shanghai Education Commission, 2013). These orders establish the subjects to be evaluated: language, mathematics, foreign language, ideological and political thinking, history, geography, physics, chemistry, life sciences and ICT. These subjects are assessed in relation to the stipulated contents in the *Shanghai School Curriculum Subject Standards* (Shanghai Municipal Education Commission, 2004).

This new programme started in 2009 and allowed 1st grade (senior) students to take ICT and geography examinations, 2nd grade students to take history, physics, chemistry and life sciences, and 3rd grade students to be assessed in Chinese language, mathematics, foreign language and ideological and political thinking.

The Shanghai Education Commission coordinates the implementation of the exam along with the cities and county-level educational administrative departments. Written subjects' marks are established by letters, with A as the highest grade and F as the lowest. F is considered as unqualified when scores are lower than 60%. Remedial exams can be taken only once: in that case a passing score is D and F is a fail. For non-written exams (ICT and skills in science subjects), there are only two possible grades, qualified and not qualified.

The time for each is exam is as follows: 2 hours for Chinese language, 1 hour 30 minutes for the other written subjects, 30 minutes for the foreign language listening and speaking test, 1 hour for ICT and 15 minutes for physics, chemistry and life sciences skills.

The exam can be part of the components universities take into account, along with the Gaokao scores, when choosing their candidates. Furthermore, some institutions, such as certain vocational colleges, do not required Gaokao scores and are lately taking this examination as a main reference. When institutions do not require the National University Entrance Exam, the selection process is called independent enrolment. Besides other advantages, this policy helps to lower the large number of students taking the Gaokao. Independent enrolment is further explained in Section 5.1.8, focusing on university policies for selecting student secondary teachers.

Once this examination has been passed, students are allowed to take the National University Entrance Exam. The national examination is designed by the MOE according to

the national syllabus; however, provinces' Education Committees adapt the guidelines to their own contexts. The subjects to be assessed depend on the students' choice and future career. Compulsory subjects are Chinese language, mathematics and foreign language. Also the content and form of these exams vary in different provinces. The other subjects are generally divided between the liberal arts (politics, history and geography) and sciences (biology, chemistry and physics).

Historically, provinces have designed their examinations into different structures, always including the three compulsory subjects and a range of choices from optional subjects. Some common structures are 3+2 (from liberal arts of sciences), 3+X (a choice of 1 or 2 subjects from their speciality), 3+2+X, etc. The most extended system is organized as 3+X, with two subjects: integrated arts and social sciences (politics, history and geography) and integrated sciences (physics, chemistry and biology). Generally, each subject is graded up to 150 points, and the maximum score is 750 points. However, some provinces have dissimilar evaluation and mark systems. For instance, Zhejiang province has three subjects (150 points each) + comprehensive liberal arts or sciences (300 points) + optional module (60 points). Therefore, the total score could reach 810 points. Other provinces that differ from the common reference are Jiangsu (maximum 480 points) or Hainan (maximum 900 points).

Shanghai municipality had, until 2011, a 3+1+X design where students took the three compulsory subjects, one subject was chosen according to the student's own interest and X referred to a comprehensive ability test, focused on research abilities. From 2012, this last exam was eliminated, and Shanghai started a 3+1 model. Each subject was graded up to 150 points, and the final score was found in an accumulative basis, hence the maximum grade was 600 points, plus 30 points based on senior secondary high performance. Still, the Shanghai university entrance examination is expected to change[37] by 2017, to a 3+3 model. In that model, Chinese language, mathematics and foreign language will still be compulsory, and the other three subjects can be chosen among politics and ideology, history, geography, physics, chemistry and life sciences. Compulsory exams are worth 150 points each, while the three optional exams worth 70 point each. The maximum final score is 660 points. Grades are measured from A+ (70 points) to E (40 points).

[37] The notice was covered by many Chinese media. Data can be consulted (in Chinese) at http://china.caixin.com/2014-09-19/100730901.html, or at http://shanghai.xinmin.cn/msrx/2015/02/03/26709326.html [April 20, 2015].

Once the Gaokao has been passed, students can enter a university degree. This stage is, as explained earlier, regulated by the Higher Education Law of the People's Republic of China. However, since Chinese universities can belong to many categories, such as comprehensive universities, colleges or normal universities, the regulations are not very specific, resulting in a noticeable variation among institutions' programmes, curricula and assessment systems. Some are directly under the management of the Ministry of Education, others are run by provincial authorities, autonomous regions and municipal governments, and in some cases institutions are run by local major cities.

Most of the institutions in China are public-funded and managed. However, since 1987, China has allowed non-governmental institutions into their territory. According to a United Kingdom Department of International Development and World Bank study (2004), that year, China promulgated the Certain Provisional Regulations on Schools Run by Non-governmental Sectors and the Regulations on Schools Run by Non-governmental Sectors. In December 2002, the National People's Congress passed the Law of the People's Republic of China on Promotion of Non-government and Private Schools, and two years later, in April 2004, the Regulations on Implementing the Promotion Law.

Private schools are defined in the second article of the Promotion Law as "activities conducted by public organizations or individuals, other than State organs, to establish and run schools and other institutions of education with nongovernmental funds, which are geared to the needs of society" (Promotion Law, cited in United Kingdom Department of International Development and the World Bank, 2004, p. 8). These kinds of schools are mainly concentrated in big cities, such as Beijing and Shanghai, and the school population attending these centres belong to wealthy families. Most of the owners are wealthy Chinese, or foreign institutions which offer western-orientated education, typically bilingual.

The Chinese education system also includes other modalities and levels such as mixed-funded schools (with different agreements between administration and entities), special education, vocational training or education for adults. However, due their lack of relevance to the scope of this research, they are not included in the description. Table 4.1 gives a general view of the structure and main characteristics of the regular system.

Table 4.1: Chinese education system overview (non-vocational)

<table>
<tr><th colspan="3">Institution</th><th colspan="2">Organization</th><th>Main characteristics</th><th>Ages</th></tr>
<tr><td colspan="3" rowspan="5">University
大学</td><td>PhD</td><td>3/4 years</td><td rowspan="5">No standard credit system, however most universities use this unit (credits) to design their programmes.</td><td rowspan="5">+18</td></tr>
<tr><td colspan="2">PhD entrance exam</td></tr>
<tr><td>Master's</td><td>2/3 years</td></tr>
<tr><td colspan="2">Examination to enter post-graduate studies (NPEE)[38]</td></tr>
<tr><td>Bachelor's</td><td>4/5 years</td></tr>
<tr><td colspan="7">Gaokao (University entrance examination)</td></tr>
<tr><td colspan="7">Senior Secondary School Exam and Senior Secondary Education Certificate</td></tr>
<tr><td colspan="3" rowspan="3">Senior Secondary Education 高级中学 （普通高中）</td><td colspan="2">3rd grade (高三)</td><td rowspan="3">Credit accumulation system. No different paths, some elective classes. Main subjects: Mathematics, Chinese language and English. Main goal: Preparing for the Gaokao.</td><td rowspan="3">15-18</td></tr>
<tr><td colspan="2">2nd grade (高二)</td></tr>
<tr><td colspan="2">1st grade (高一)</td></tr>
<tr><td colspan="7">Zhongkao</td></tr>
<tr><td colspan="7">Junior Secondary Education Exam and Junior Secondary Education Certificate</td></tr>
<tr><td rowspan="11">Basic Education. Compulsory and free (or low charges for uniforms and materials)</td><td rowspan="3">Junior Secondary Education 初级中学</td><td colspan="2">3rd grade (初三)</td><td rowspan="3">No different paths, few electives classes. Compulsory classes: ideology and moral, mathematics, science, foreign language…</td><td rowspan="3">12-15</td></tr>
<tr><td colspan="2">2nd grade (初二)</td></tr>
<tr><td colspan="2">1st grade (初一)</td></tr>
<tr><td colspan="5">Evaluation test (diagnostic)</td></tr>
<tr><td rowspan="6">Primary Education 小学</td><td rowspan="3">High cycle</td><td>6th grade (六年级)</td><td rowspan="6">No different paths. Compulsory classes: ideology and moral character,
Chinese language, mathematics, natural science, physical education and health, science, music, art, ICT.

The compulsory education structure can be 6+3 or 5+4. Sometimes 6th grade belongs to junior secondary education.</td><td>11-12</td></tr>
<tr><td>5th grade (五年级)</td><td>10-11</td></tr>
<tr><td>4th grade (四年级)</td><td>9-10</td></tr>
<tr><td rowspan="3">Low cycle</td><td>3rd grade (三年级)</td><td>8-9</td></tr>
<tr><td>2nd grade (二年级)</td><td>7-8</td></tr>
<tr><td>1st grade (一年级)</td><td>6-7</td></tr>
<tr><td colspan="3" rowspan="3">Early Childhood Education 幼儿园</td><td colspan="2">Senior (大班)</td><td rowspan="3">No different paths.</td><td rowspan="3">3-6</td></tr>
<tr><td colspan="2">Junior (中班)</td></tr>
<tr><td colspan="2">Freshmen (小班)</td></tr>
</table>

Source: Researcher's original work based on Chinese legislation (Section 4.1.5.1) and UNESCO-IBE (2011)

[38] National Post-graduate Entrance Examination

4.1.5.4. SECONDARY EDUCATION CURRICULUM DESIGN AND SCHEDULES

Curriculum

Like the whole education system, the Chinese secondary education system is highly centralized. The Ministry of Education settles the guidelines for all subjects, which are later executed by the provinces and municipalities. However, progressively, provincial education departments have been gaining autonomy to implement national regulations. As a result, there are now significant differences across provinces (WENR, 2011)[39]. However, these differences are not as deep in junior secondary education as in senior secondary education.

- Junior secondary education

The junior secondary education curriculum is determined by national legislation concerning compulsory education, such as the abovementioned Compulsory Curriculum Experimental Programme (MOE,2001b), the Compulsory Education Curriculum Standards (MOE, 2011a), and the National Curricular Plan (MOE, 2013c). It is also affected by municipalities and provincial legislation. Specifically, in Shanghai, junior secondary education is regulated by the 2014 Notification for School Year Lesson Plans and Instructions (Shanghai Municipal Education Commission, 2014a) and the Topics Guide for Shanghai Primary and Secondary Educational Integration (Trial), (Shanghai Municipal Education Commission, 2014b).

The 2011 Compulsory Education Curriculum Standards detail the syllabus of 19 subjects based upon the 2001 Compulsory Curriculum Experimental Programme. Primary and junior secondary education standards develop the following subjects: language, English, Japanese, Russian, morality and life courses, morals and society, moral education, mathematics, physics, chemistry, biology, junior secondary sciences, history, geography, social history, arts, music, fine arts, and sports and health.

The 2001 national legislation proposes nine subjects for junior secondary education, morals, history and society (or history and geography), science (biology, physics and/or chemistry), Chinese language, mathematics, foreign language, sports and health, arts (music

[39] WENR stands for World Education News & Reviews. It is an American publication which focuses on international education, published by World Education Services.

or art) and comprehensive practice activities (includes ICT education, research and new learning, community service and social practices, and labour and technical education). Other local or school curricula can be added to these subjects

The national order established a distribution of the classes in percentages. This distribution allocates 7-9% for morals classes, 3-4% for history and society, 7-9% for sciences, 20-22% for Chinese language, 13-15% for mathematics, 6-8% for foreign language, 10-11% for sports and health, 9-10% for arts, and 16-20% between comprehensive practices and local and school curricula. During the three grades, students attend school 34 hours a week, however due to differences in the length of the school year, the total time for 1st and 2nd grades (junior) is 1,190 hours a year, while for 3rd grade (junior) the time is 1,122 hours a year. The school year is 35 weeks, with 2 weeks for examinations (4 in 3rd grade-junior) and 13 weeks of vacations, including national holidays.

The OECD (2014a) data shows an average compulsory instruction time for primary school of 612 hours a year and 816 hours a year for lower secondary school. This does not include the non-compulsory education hours, which may explain the difference between national and international data. The national legislative guidelines are followed by the regions as showed by a national survey (Xinhua, 2007 in China Daily, 2007; Beijing Review, 2008), from 2007, which estimates the junior and senior secondary school year to be distributed across 245 days per year (around 35 weeks). It calculates junior secondary students' weekly hours as 34 divided into 45-minute lessons. These data correspond to the aforementioned national standards designed in the Compulsory Curriculum Experimental Programme, (MOE, 2001b), which established 26 hours a week for Grades 1 and 2; 30 hours a week for Grades 3 to 6 (primary) and 34 hours a week for Grades 1, 2 and 3 (junior).

Some provinces and municipalities, such as Shanghai, which follow the 5+4 compulsory education system, add 6th grade to junior secondary education. In that case, the subjects are morals and society, sciences, language, mathematics, foreign language, physical education and arts. The total hours per week are 30 and per year 1,050. The adaptation of this system in the municipality of Shanghai, according to its 2009 order is as follows:

Table 4.2: Junior secondary school curriculum in Shanghai

	Subjects	Hours/week			
		Grade 6	Grade 1	Grade 2	Grade 3
Basic curriculum	Chinese Language	4	4	4	4
	Mathematics	4	4	4	5
	Foreign Language	4	4	4	4
	Morals	1	1	2	2
	Science	2	3		
	Physics			2	2
	Chemistry				2
	Life Science			2	1
	Geography	2	2		
	History		2	2	
	Society				2
	Music	1	1		
	Art (Painting)	1	1		
	Art			2	2
	Sport and Fitness	3	3	3	3
	Labour skills	2	1	2	
	ICT	2			
	Total of week hours	26	26	27	27
Complementary curriculum	Discipline subjects (can include physical activities)	5	5	4	4
	Special subjects	1	1	1	1
	Community service and social practices	Two weeks a year			
	Total of week hours	6	6	5	5
Research activities		2	2	2	2
Morning or afternoon assembly		15-20 minutes a day			
Gymnastic and eye exercises		Approximately 40 minutes a day			
Total hours a week (40 minutes per lesson)		34	34	34	34

Source: Adapted from Shanghai Municipal Education Commission (2014a)

The Shanghai order also specifies that the school year lasts 40 weeks, of which 2 are for social practices and community services. From grade 3 (primary) to Grade 2 (junior), classes last 34 weeks, and exams and holidays 4 weeks. In the last year, Grade 3 (junior), classes are distributed across 30 weeks, ending around April.

A class regarding current affairs and moral character shall be established once a month and, also once a month, every class gathers to talk about the school and class situation. All

junior secondary students have 40 minutes of gymnastic and eyes care activities a day. Twice a week students participate in a 40-minute physical activity, which can be included in some classes or as an extra activity planned in the afternoon fringe or as a regular after-school (usually before 17:00).

Students in Grades 2 to 6 (junior) have a half-hour writing class every week, which is included in the subjects related to discipline. Besides these classes, all grades have the "discipline subjects". The content integrated in "discipline subjects" is planned along the notice published in 2014 by Shanghai Municipal Education Commission (2014b). Subjects in this category are divided into five areas: safety and prevention, law and morality, ethnic and cultural education, environment and health, and practices and comprehensive education. Junior classes are as follows:

Table 4.3: Discipline subjects for junior secondary school in Shanghai

	Grade 6	Grade 1	Grade 2	Grade 3
Safety and prevention	Campus and Road-safety education. Disaster self-care education.	Road safety education. Network and Internet security education.	Emergency situations Education. Disaster prevention and self-care education.	Swimming safety precautions. Road safety education.
Law and morality	Civics. Integrity Education.	Integrity education. Network and Internet security education.	Legal education.	Anti-cult/gangs Education.
Ethnic and cultural education	Chinese traditional culture and education.	National unity education. Chinese traditional culture and education.	National unity education. Chinese traditional culture and education.	Chinese traditional culture and education.
Environment and health	Environmental and health education (including adolescent education).	Health education (including mental health education).	Health education (including AIDS prevention education).	Environmental Education. Health Education.

Practices and comprehensive education	Food and water saving education.	Science education. Water conservation education.	Science education. Water conservation education.	Archival Education.

Source: Adapted from Shanghai Municipal Education Commission (2014b)

- Senior secondary education.

Senior secondary education is mainly regulated by the Education Law, along national plans later detailed by the Ministry of Education. The actual curriculum guidelines are based on the 2003 Ordinary High School Curriculum Program (experimental) (MOE, 2003a). Provinces and municipalities adapt this general framework to their territory. In Shanghai, as for junior secondary school, the Shanghai Municipal Education Commission details the senior secondary education curriculum in the Notification for School Year Lesson Plans and Instructions (2014a).

According to the national guidelines, the secondary school curriculum is organized in eight learning areas: language and literature, mathematics, humanities and social sciences, sciences, technology, arts, physical education and health, and general practice. There are 40 weeks per school year, of which one week is social practice. During the year, 11 weeks are distributed between winter and summer vacations and national holidays.

Each semester is divided into two 10-week periods (9 weeks for lessons, and one week to review the exam). Usually each subject is taught during 36 hours per period, which is 4 hours a week (equivalent to 2 credits), except for sports and health, art, music and fine arts which are taught for 18 hours per period (equivalent to 1 credit). Each year students should undertake a week of social practices, worth 2 credits a year, and by the end of the third year at least 10 days of community service, obtaining another 2 credits.

To graduate, students should take and pass at least 144 credits, of which 116 are in compulsory subjects (including the 15 credits on learning activities research, 2 credits on community service and 6 credits on social practices), and at least 6 credits in elective classes I and II. Final grades are given using a letter system. Most provinces mark their classes up to 100 points, which are later converted into a letter. The distribution is as follows:

Table 4.4: National Senior secondary curriculum (trial)

<table>
<tr><th rowspan="2">Areas</th><th rowspan="2">Subjects</th><th colspan="3">Credits</th></tr>
<tr><th>Compulsory (Total 116, 80.5%)</th><th>Elective I (At least 6 credits, 4%)</th><th>Elective II (18 credits, 12.5%)</th></tr>
<tr><td rowspan="2">Language and Literature</td><td>Chinese</td><td>10</td><td rowspan="15">These subjects are designed according to community needs, students' talent, and common compulsory subjects already chosen.</td><td rowspan="15">Decided by the schools according to the environment, context, needs, technological capacity and resources.</td></tr>
<tr><td>Foreign Language</td><td>10</td></tr>
<tr><td>Mathematics</td><td>Mathematics</td><td>10</td></tr>
<tr><td rowspan="3">Humanities and Social Science</td><td>Politics</td><td>8</td></tr>
<tr><td>History</td><td>6</td></tr>
<tr><td rowspan="4">Geography</td><td rowspan="4">6</td></tr>
<tr><td rowspan="4">Sciences</td></tr>
<tr><td>Physics</td><td>6</td></tr>
<tr><td>Chemistry</td><td>6</td></tr>
<tr><td>Biology</td><td>6</td></tr>
<tr><td>Technology</td><td>Technology and TI</td><td>8</td></tr>
<tr><td>Art</td><td>Art, music and fine arts</td><td>6</td></tr>
<tr><td>Physical Education and Health</td><td>Sports and health</td><td>11</td></tr>
<tr><td rowspan="3">Practices</td><td>Learning activities' research</td><td>15</td></tr>
<tr><td>Community service</td><td>2</td></tr>
<tr><td>Social practice</td><td>6</td></tr>
<tr><td>Total credits</td><td colspan="2">144</td><td></td><td></td></tr>
</table>

Source: Adapted from MOE (2003a)

The 2014 Shanghai Notification for School Year Lesson Plans and Instructions also adapted this general framework to senior secondary schools in Shanghai. Later, as in junior secondary education, a specific document established Shanghai's classes included in the 'discipline subjects'.

Table 4.5: Senior secondary school curriculum in Shanghai

	Subject	Hours per week		
		1st Grade	2nd Grade	3rd Grade
Basic curriculum	Chinese Language	3	3	3
	Mathematics	3	3	3
	Foreign Language	3	3	3
	Physics	2	2	
	Chemistry	2	2	
	Life Science		3	
	Sciences			2
	Politics	2	2	2
	History	2	2	
	Geography	3		
	Society			2
	Arts	1	1	1
	Sport and Fitness	3	3	3
	Labour skills	1	2	
	ICT	2		
	Total week hours	27	26	19
Complementary curriculum	Discipline subjects (can include physical activities)	5	6	13
	Special subjects or class-team activities	1	1	1
	Community service and social practices	Two weeks a year		
Research activities		15 to 20 minutes a day		
Gymnastic and eye exercises		Approximately 40 minutes a day		
Total hours per week (40 minutes per lesson)		35	35	35

Source: Adapted from Shanghai Municipal Education Commission (2014a)

Table 4.6: Discipline subjects for senior secondary school in Shanghai

	1st grade	2nd grade	3rd grade
Safety and prevention	Campus security education. National security education.	Road safety, public health and fire emergency education.	Travel self-protection and emergencies education.
Law and morality	Civics. Integrity Education.	Integrity education. Anti-sect/gangs education.	Network and Internet security education.
Ethnic and cultural education	National unity education. Chinese traditional culture and education.	National unity education. Chinese traditional culture and education.	Chinese traditional culture and education.
Environment and health	Life education. Environmental education. Health education (including adolescent education).	Environmental education. Health education (including mental health education).	Health education. Counselling for post-graduation studies.
Practices and comprehensive education	Science education. Quality education.	Food and water saving education.	Archival education.

Source: Adapted from Shanghai Municipal Education Commission (2014b)

According to Shanghai's orders, which make concrete national legislation, out of the whole school year (40 weeks) two weeks, instead of one, are for social practice. For Grades 1 and 2, holidays, exams and major events take 4 weeks, and the other 34 are teaching time. In the 3rd grade of senior secondary school, the class schedule is distributed over 30 weeks, while exams, holidays and major events take place during 10 weeks (including the High School Proficiency Exam and social practices).

All classes last 40 minutes, and the total weekly time is 35 hours. Elective classes and research activities in Grade 3 have to be planned by the schools and the total weekly time cannot exceed 35 hours. Like in junior secondary school, all grades should have 40 minutes a day for eyecare activities and gymnastics, a twice-weekly 40-minute period of physical activity, time for the complementary curriculum, etc. If these activities cannot be included in the regular schedule, they can be added as after-school activities.

Schedules

Generally, the Chinese school year runs from the beginning of September to the end of June or mid-July. The school year is dived into two semesters: the first starts in September to the beginning of the Spring Festival (this holiday depends on the lunar calendar, however it is usually celebrated in February), and the second starts after the Spring Festival to the end of June.

Scholars commonly have between one to three weeks' vacation to celebrate Spring Festival, three to five days starting on 1 October for the Chinese National holiday, and around two months' vacation in summer. Besides these holidays, students have approximately another seven free days, distributed through the year according to the official holidays (New Year's Day, Qingming Festival, May Day, Dragon Boat Festival and Mid-Autumn Day). However, having official holidays does not mean students are resting, since most of them spend their holidays studying for entrance examinations, attending summer schools or taking extra classes.

Chinese children go to school five or six days a week (Monday to Friday or Monday to Saturday), but the schedule depends on the educational stage. An average school day lasts about eight hours for primary school, around ten hours for junior secondary education and approximately twelve hours for senior secondary education, with a two-hour lunch break and five or ten minutes' break between classes at all stages. The average junior secondary education day runs from early morning, starting between 7:00 and 7:30, to early evening, around 16:00 or 17:00, while the senior secondary education day can run from 7:00 to 18:00 or 19:00 in ordinary secondary schools or from 7:00 to 22:00 p.m. in key schools, or in the last year before taking the National Entrance Examination. A typical Chinese junior secondary student day can be distributed as shown in Table 4.7:

Table 4.7: Junior secondary school schedule

Junior Secondary Education (Monday to Friday)	
7:40-12:30	5 regular 40-minutes classes + 1 lecture 10-minute break between classes
12:00 – 13:30	Lunch break
13:30-15:50	3 regular 40-minute classes 10-minute break between classes
16:00-17:30	2 40-minute classes mainly elective classes/ autonomous study/ class meetings

Source: Researcher's original work

After compulsory education, a division between high-level schools and regular schools is allowed. As a consequence, both senior secondary schools and universities are divided into different groups. Universities can be National Key Universities (those included in Project 211 and Project 985), [40] Provincial Key Universities, General Universities, Normal Universities or colleges. Senior secondary schools can be general or key schools. Some key schools are also boarding schools. The differences between regular and key senior secondary schools schedules are as follows in Tables 4.8 and 4.9:

Table 4.8: Senior secondary school schedule

Senior Secondary Education (Monday to Friday/Saturday)	
7:30-12:20	5 regular 40-minutes classes 10-minute break between classes - 20-minutes Exercise break
12:20 – 14:30	Lunch break + Autonomous study
14:30-16:00	2 regular 40-minute classes 10-minute break between classes
16:10-17:20	Autonomous study
17:30-19:00	2 40-minute classes, mainly elective classes /class meeting
19:00-	Autonomous study

Source: Researcher's original work

[40] Project 211 started in 1995 as an MOE project to build 100 high-quality profile universities, to expand the programmes offered by these higher institutions and to raise research standards in the country. This initiative was the only key project in the area of education during both the Ninth Five-Year Plan (1996-2000) and Tenth Five-Year Plan (2001-2005). Project 985 started in 1998, and aimed to place some universities in the highest international field by giving these institutions a substantial financial investment. East China Normal University participates in both projects.

Table 4.9: Senior secondary key school schedule

Senior Secondary Education 1st and 2nd Grade (Monday to Saturday or Sunday with one or two free days a month in 3rd year)		
1st and 2nd year	7:00-12:20	1 reading or English class + breakfast + 4 normal classes +exercise break
	12:20-14:20	Lunch break and autonomous study
	14:20-18:00	3 classes
	18:00-18:50	Dinner break and autonomous study
	18:50-21:50	4 night classes (sometimes electives)
3rd year	6:30- 13:00	Reading or English class + breakfast + 5 normal classes + exercise break
	13:00-13:30	Lunch break and autonomous study
	13:30-18:00	5 Classes
	18:00-18:50	Dinner break and autonomous study
	18:50-21:50	4 night classes (compulsory)
		Autonomous study

Source: Researcher's original work

4.1.5.5. SECONDARY EDUCATION INSTITUTIONS AND TEACHERS

According to the China Statistical Yearbook 2014 (National Bureau of Statistics of China, 2014), there are 52,764 public centres of junior secondary education. These institutions include regular junior secondary schools (38,747) and 9-year schools (14,017). 9-year schools refers to institutions where the whole compulsory stage, primary and junior secondary education, is taught. Adding up the professionals working in all kind of public junior education, there are 3,479,996 full-time teachers.

At this level, non-government institutions represent almost half of what they represent in the senior secondary education level, and their presence is, nationwide, very low. Only 7.9% (4,535) of schools belong to private organizations. The percentage of full-time teachers (6.9%) working in these centres correspond to the total amount of each type of centres.

In the upper level, senior secondary education, there are 15,727 regular senior secondary schools in China, of which 13,352 are public institutions. At this level, too, the role of public schools is much higher than that of private schools. Regular senior secondary schools include combined secondary schools, regular high schools and 12-year schools. The term 'combined

schools' makes reference to institutions with both junior and senior secondary education, or with more than one modality of education, while 12-year schools refers to institutions with primary, junior secondary and senior secondary education. Out of the senior secondary schools, most of the centres are regular high schools (6,591), followed by combined centres (5,861) and 12-year schools (900).

Counting all the above senior secondary education institutions, there are 1,874,052 full-time teachers working in them. Besides the public senior secondary schools, there are 2,375 non-government institutions, which represent around 15% of the total educative offer. In 2013, there were 240,426 full-time teachers working in senior secondary education.

The 519 regular junior secondary schools of Shanghai are covered by 36,049 full-time teachers, while the 243 regular senior secondary schools employ 16,600 full-time teachers.

Table 4.10: Junior and senior secondary institutions and teachers in China, 2013

Type of school[41]	Schools		Full-time teachers	
Total junior secondary education schools in China (regular junior secondary schools and 9-year schools)	57,299	100%	3,738,658	100%
Public junior secondary schools	52,764	92.1%	3,479,996	93.1%
Regular junior secondary (Non-government funds)	4,535	7.9%	258,662	6.9%
Total regular senior secondary education in China (regular senior secondary schools, combined schools and 12-year schools)	15,727	100%	1,874,052	100%
Public senior secondary education	13,352	85%	1633626	87.2%
Regular senior secondary (Non-government funds)	2,375	15%	240426	12.8%
Shanghai junior secondary	519		36,049	
Shanghai senior secondary	243		16,600	

Source: Researcher's original compilation and analysis from National Bureau of Statistics of China (2014)

[41] Since the topic of the essay focused on regular secondary education, the data display in this section for institution or teachers' amount do not include neither vocational nor adult education.

In junior secondary schools 99.28% are full-time qualified teachers, while this percentage slightly decreases in senior secondary schools where 96.80% of full-time teachers are qualified (MOE, 2013b).

Teachers' salaries are not easy to determine with exactitude since they highly depend on many factors, such as the province, the area (rural or urban), the level, the experience, the benefits included in the salary (such as house or clothes), and performance-related pay. Despite the disparity, according to the study carried out by Sen (2015) in six provinces (Hebei, Shandong, Ningxia Hui, Sichuan, Guangdong and Shaanxi), salaries can vary from ¥2,000 to ¥5,000 (US$325 to US$814), including benefits. Salaries in main cities such as Shanghai and Beijing tend to be a little higher, between ¥5,000 and ¥6,000 (US$814 to US$977), not including private schools' salaries or foreign teachers, where pay is usually higher.

Although Chinese teachers' salaries are not very high, teaching is often seen as a respected profession with stable salaries. Particularly in main cities such as Beijing and Shanghai, education policies draw preferential access for teacher candidates to higher education institutions and degrees, which attracts numerous high-profile students. Teachers' work does not finish at the official teaching time, and many teachers attend with students out-of-school competitions, such as mathematic Olympiads, or complement their official classes with tutoring hours.

A similar situation occurs when calculating teachers' working hours. According to a study carried out in 2014 by the National Social Science Fund (cited in National Institute of Education Science, 2014), teachers' weekly hours should be calculated as 8 hours a day, and as established by law, 40 hours a week. Of this time, less than a quarter is dedicated to classroom teaching. Average teaching hours are divided into 16 periods (45 minutes per period), therefore 12 hours per week. Other data in the same research assumes that teachers can expend up to 9 hours a day instead of 8, which leads to 45 hours working a week, still with 12 teaching hours. According to the report, if the 'invisible hours' (teachers' extra time) are taken into account, their working hours can reach 54.5 a week.

Teachers' role and status

Chinese tradition and respect for teachers is well-known across the world and history. The seed of such respect for teachers and education is inherent to Chinese culture (further

addressed in Section 4.3.2), and was mainly spread through Confucius'[42] teachings. From the Han dynasty era (206 BC–229 AC) until the end of the Qing Dynasty (1911) Confucianism was the main doctrine among Asian societies. According to Zhang and Zhong (2003) and Starr (2012), it is claimed that Confucius gave the guidelines for the traditional Chinese curriculum when editing the Five Classics (*Book of Songs, Book of History, Book of Changes, Book of Rites* and the *Spring and Autumn Annals*).

However, Confucius' doctrine is, under a contemporary or a western point of view, very unequal in some topics and particularly different to current approaches in others. For example, collectives such as women or servants are treated under a highly unequal perspective. Failure in learning is seen as a lack of application and as a result of pupils not making enough effort. In contrast to western cultures, where personal capacities or context characteristics are taken into account, ancient China gave students full responsibility for their outcomes.

Starr's (2012) analysis of China and the Confucian education model detects some of the characteristics of the Chinese traditional system, of which various are still latent in Chinese education. Some of the values whose roots can be found in Confucius' philosophies are the emphasis on examinations as a way to acquire higher status, moral training which must be reflected in behaviour as a core content of education, or the statement of education as an accessible field to everyone. Under Confucius' perspective, education is serious and must be taken as serious, progress is possible through hard work and it is always possible to succeed if you work hard enough.

Later on, the communist period brought new values and implemented policies to solve some of the inequalities. From 1949, many challenges were tackled, pursuing the objective to eliminate illiteracy, train workers, educate in politics and socialist values, and remodel behaviours and attitudes. A period of change started, and multiple factors influenced the role of teachers. Under communist rule, children were educated in socialist values in contrast to

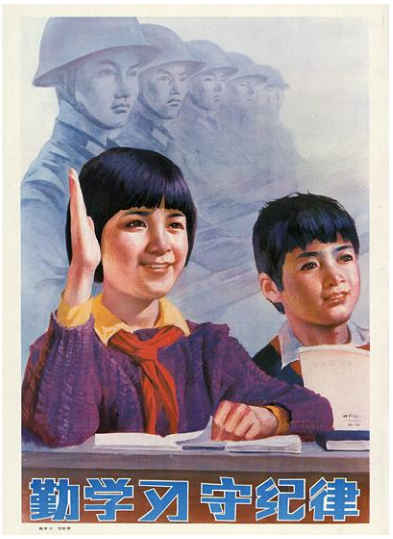
[42] Confucius (551 BC-479 BC) is undoubtedly the most influential Chinese philosopher, teacher and politician of all time. Founder of Confucianism, his doctrine was based on the intrinsic value of humanity by setting up relationships full of kindness (humanism), loyalty (hierarchy), respect and reciprocity (harmony). Confucius based his teachings on people's virtues and power. Some of his main concepts were humanity and goodness (*ren,* 仁), character, power, virtue *(de,* 德), loyalty (zhong, 忠), wisdom (zhi, 智) and right, righteousness and appropriateness (*yi*, 義). His teachings became objects of worship, generating a continuous current paradigm in many Asian societies.

the feudal or capitalist notions used in the precedent period. Education was heavily influenced by the Soviet Union during the first period, approximately from 1949 to 1957, when the Russian model was replicated and later rejected while searching for a Chinese formula adapted to the needs of the country; in a second period, during the Great Leap Forward (1958–60), the Socialist Education Movement (1962–65) and the Cultural Revolution (1966-1976), China rejected both traditional Chinese and western philosophies, in search of its new own identity. Teachers were always valuable and knowledge was always encouraged, however the focus of learning was moved from science and literature transmitted through intellectuals, to agricultural and handwork professions transmitted through farmers and artisans. This period had a devastating effect on teachers' status and social perception towards the profession.

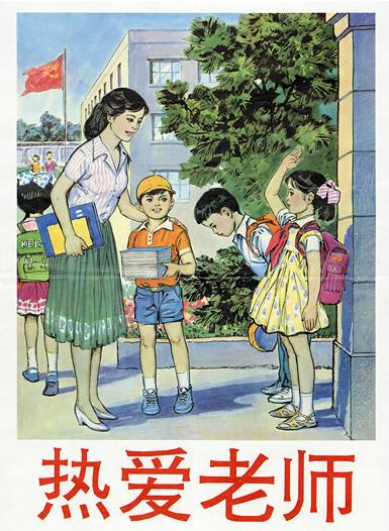
These effects were profoundly analysed by Hsi-en Chen (1981), who denounces teachers' devaluation. At that time, during the Cultural Revolution, teachers were labelled as part of the intellectual elite and were no longer recognized as the centre of education, or desirable for education. Teachers were substituted by peasants with little schooling in an attempt to narrow the cultural gap between workers and peasants and urban and rural regions. Teacher education became, mainly, ideological-political training, and teachers' role switched to worker-peasant-soldier. The Confucian tradition was considered to be linked to the former prestige of teachers, their irrefutable teachings and student's obeisance, which was not acceptable to revolutionary principles.

It was not until the post-Mao era that teachers started gaining social recognition again. A period of modernization started around 1977, when Deputy Prime Minister Deng Xiaoping started a campaign of national conferences involving education. Xiaoping laid out educational programmes to restore academic, knowledge and teachers' relevance, as well as selective educational systems. Deng Xiaoping focused on four aspects of education: improving the quality of education, strengthening revolutionary order and discipline, keeping pace with the requirements of economic development and raising the level of teacher training and teaching efficiency (Hsi-en Chen, 1981). Propaganda posters (Chinese Posters Foundation, website) and initiatives started and were spread across the country to restore the importance of education and teachers. These posters show the image China wanted to recover:

1977, We and our teacher



1986, Study diligently, observe discipline



1994, Love your teacher

1994, Love science

1996, Honor the teacher

1998, Love your teacher

Despite this period, Confucius philosophies still transcended into Chinese contemporary societies where perception of the role of teachers and students is clearly associated with Confucian values, and show strong differences to those of western societies. Cortazzi and Jin (1996, cited in Starr, 2012) carried out research with Chinese university students to detect what is conceived as good teachers' qualities. Chinese students choose as the first feature "teachers' knowledge", followed by "teacher's personal qualities and attitudes" (patient, humorous, good moral example, friendly). Drastically lower values were given to "teaching methods" and "clear explanations".

As a result of these social, political, economic and cultural changes and challenges, some teachers detected that class dynamics could became mainly teacher-centred with very large classes where students' active participation is rather low (Starr, 2012) and teachers kept as the most important element in the class.

Impressively, after a long history of conflict about teacher's role, China has admirably recovered international first place when evaluating its teachers. In the Global Teacher Status Index (Varkey Gems Foundation, 2013), which analyses 21 countries from all over the world, Chinese society awarded their teachers general scores which were by far the highest of the study. Chinese valuations of their teachers obtain 100 points, 26.3 points higher than the second country in the study, Greece (73.7).

Comparing teaching to other professions (nurses, doctors, librarians, social worker and local government managers), China was the only country placing teachers and doctors in the same status. This also justified the fact that around 50% of parents in China would encourage their children to become a teacher. Regarding respect for teachers, 75% of Chinese society thinks that pupils respect their teachers, in contrast to the 27% average of the other countries. When giving a grade to trust in teachers as good agents to deliver education, the Chinese average grade is 6.7 out of 10, while the survey average is 6.3 points.

4.1.5.6. SECONDARY EDUCATION STUDENTS AND FAMILIES

According to the World Bank statistics, gross primary school enrolment[43] was 113.06 in 2011 (115.45% for girls and 111.09% for boys), while secondary education gross enrolment was 81.36% (83.34% for female and 79.68% for males). The data highlights the increment in

[43] Gross enrolment rate is the rate of total enrolment, regardless of age, for the population of the age group that officially corresponds to the level of education shown.

students' access to higher levels of education. In junior secondary education, in 2002, students' net enrolment was estimated as 98.6% (MOE, 2008, cited in UNESCO-IBE, 2011) while the latest MOE data shows a gross enrolment rate of 104.1% in 2013 (National Bureau of Statistics of China, 2014).

While students' enrolment increases, the student-teacher ratio is constantly decreasing. In junior secondary school the student-teacher ratio decreased from 13.59: 1 in 2012 to 12.76: 1 in 2013 (MOE, 2013b). This indicator is however susceptible to deep differences among provinces. According to official information, the student-teacher ratio is slightly lower in Shanghai, with 12.11 students per teacher (National Bureau of Statistics of China, 2014).

The MOE estimated the senior secondary education gross enrolment rate in 2013 as 86%, one point above the preceding year. The student-teacher ratio also improved from 15.47: 1 in 2012 to 14.95: 1 in 2013. As with the previous level, the Shanghai student-teacher ratio is lower than average, with 9.45 students per teacher in 2013 (National Bureau of Statistics of China, 2014).

In 2013, out of the 99.7% Chinese net enrolment rate in primary education, a remarkably high 98.3% of students accessed the next stage of education, junior secondary education. After the compulsory stages, the promotion rate decreases to 91.2% when reaching senior secondary education, and again decreases to 87.6% when entering higher education. Promotion rates, especially in the last two transitions, have experienced a major improvement, mainly from compulsory to post-compulsory education. Ten years previously, in 2003, the rate of students going from primary to junior secondary school was 97.9%; from junior secondary to senior secondary school a low 59.6% (students underwent strict selection to enter the non-compulsory level); and, from senior secondary to high education it rose again to 83.4% (National Bureau of Statistics of China, 2014).

One of the China's biggest challenges has been the objective to offer general access to education. Its large population requires a high amount of material and human resources to educate a high percentage of an illiterate society which was barely emerging towards a stable and prosperous economic situation. Nevertheless, a great number of students are now educated at all three levels of education. For instance, according to the National Bureau of Statistics of China, almost 10.5 million students graduated from a higher institution

programme in 2013: nearly 6.5 million students graduated from regular undergraduate[44] institutions, 2 million graduated from undergraduate education in adult institutions, 1.5 million graduated in Web-based programmes for undergraduates, almost 0.5 million finished their Master's degree and around 53,000 earned a Doctor's degree.

The numbers have tripled when focusing on secondary education. In 2013 nearly 31 million students graduated between junior and senior education. Out of that 31 million, around 8 million graduated from regular senior education and almost 7 million from senior vocational education, while 15.5 million graduated from regular junior secondary schools and 0.5 million from adult junior secondary school.

Specific information about secondary students can be found in Table 4.11, where all facts refer to 2013 data. Graduates is the number of students finishing and passing the complete cycle (junior or senior education), and enrolments is the total number / percentage of pupils studying at each level.

Table 4.11: Junior and senior secondary students in China, 2013

	Graduates		Enrolments	
Total junior secondary education	16,993,160	100%	49,014,214	100%
Public junior secondary (regular junior secondary schools,9-year schools, 12-year schools and combined secondary schools)	15,608,243	91.9%	44,390,732	90.6%
Regular junior secondary (Non-government funded)	1,384,917	8.1%	4,623,482	9.4%
Total regular senior secondary education	8,737,378	100%	26,675,262	100%
Public senior secondary education (regular senior secondary schools, combined schools and 12-year schools)	7,989,789	91.4%	24,358,817	91.3%
Regular senior secondary (Non-government funded)	747589	8.6%	2316445	8.7%
Shanghai junior secondary	94,135		436,696	
Shanghai senior secondary	52,675		156,817	

Source: Researcher's original compilation and analysis from National Bureau of Statistic of China (2014).

[44] The undergraduate diploma corresponds to European university degrees. They are divided into short-cycle (3 years) and regular courses (4 or 5 years).

Students' role

The abovementioned research carried out by Cortazzi and Jin (1996, cited in Starr, 2012), also evaluates which characteristics students valued the most in themselves. Again "hard working" is the imperative aspect for most (43% of students chose it as the most relevant factor), followed by "being sociable and learning from and with others". The next facets were related to attitudes, respecting and cooperating with and paying attention to the teacher. The less-valued items were independent study and, last, asking questions in class.

In contrast to western countries, where asking questions is understood as showing an explicit interest in the subject, in Chinese culture it is seen as a critical action which may lead to negative consequences. Chinese students may feel that their questions and opinions are presumptuous and disrespectful: if the question is too simple they fear loss of face, or it can be seen as criticism of the teacher (this subject is further analysed in Section 4.3.2). They can also fear or be embarrassed to slow down the rest of the class which is ready to move on to the next topic. The same feelings lead students to fear answering questions or making mistakes. On the other hand, if the question is too simple, they will not feel challenged and will not try to answer it (Li, Wang and Li, 2006; Bong Hin Joo and Nori, 2007; Xie, 2010; Starr, 2012).

Hardworking is undoubtedly one of the main characteristics of Chinese students, who endure high pressure from society, families and the education filters of an extremely competitive system, in which possibilities to keep studying cannot be taken for granted. Besides the official schedule, the total amount of instruction time is quite difficult to calculate. In China-Shanghai, according to the OECD (2014e), students expend an average of 14 hours a week doing homework. Society encourages parents to increase children's competitiveness if they wish them to enter a high-level secondary senior school or a well-considered university. Extra activities often include Olympic Math class, Chinese writing class and English, while it is also very common to take sports activities, such as badminton or some martial art, and music classes, such as piano or violin.

However, overloaded schedules have become a double-edged sword for Chinese students' lives: while obtaining the world first place in academic results they also show one of the world's highest stress levels and suicides rates for young students. The Chinese Youth and Children Research Centre started a survey in 2005, publishing the results in 2010, comparing students' life between Chinese, Japanese, Korean and USA high school students.

The research uncovers 86.6% of the Chinese participants feeling high or very high pressure because of academic matters and 45.2% reporting spending two hours or more per day completing homework (Sun, Dunne, Hou, and Xu, 2013). Students' stress is also highlighted in a national study on primary and secondary students, carried out in 2007 in 10 Chinese provinces by the National Juvenile Internet Use Survey. The research detected 66.7% of the participants perceiving too much academic pressure, while only 30.3% mentioned having too little recreation time. The most desired thing for 83.5% of participants was to improve their academic achievements (Sun, Dunne, and Hou, 2012).

The 2008 Sina website survey about scholars in China detected 40% of students sleeping according to basic recommendations (8 to 10 hours), 40% sleeping between 6 and 7 hours, and 20% of students sleeping less than 6 hours. A national survey carried out by the Chinese Youth Research Centre in 2007 analysed children between 8 and 13 years old in six major cities (Beijing, Shanghai, Guangzhou, Changchun, Lanzhou and Chengdu) and also detected a large gap in sleeping hours (Beijing Review, 2008). Sleep deficiency is very common for Chinese secondary students due to school hours, extracurricular activities and homework. This deficiency is particularly high in the year before the Gaokao.

Another factor influencing students' behaviour is related to the one-child policy started in 1978. Families expectations for their only child are commonly very high, as some of them, especially in rural areas and from families with little resources, are seen as the only way out of a precarious situation. Other Chinese values, such as the importance of covering family expectations or not losing face in front of the class, lead to a situation where "Chinese students collaborate naturally and spontaneously out of class, but are not comfortable with group work in class, where they feel work should be mediated through the teacher, who knows what is right, and where there is great potential for loss of face making errors in a formal setting in front of the group" (Starr, 2012, p. 20).

In international assessments, Chinese students score higher than most countries in almost all subjects. In PISA 2012 (OECD, 2014c) the OECD average score was 494 in mathematics, 496 in reading and 501 in sciences. China-Shanghai scored 613 in mathematics, 570 in reading and 580 in sciences. Chinese students are not only ranked first in academic marks, but they are also the students who skip fewer classes or days of school. While 25% of the students in OECD reported having skipped classes (being late for school) or days of

school in the two weeks prior to the PISA test, this rate lowers to 4% in the case of Chinese students.

Families' role:

Chinese families are highly concerned about their children education, and have strong influential attitudes towards their choices. Education is considered a family matter and parental involvement is a key factor in pupils' achievements (Zhang and Carrasquillo, 1995; Huang and Gove, 2012; Starr, 2012). According to Credit Suisse (2013), around 13% of Chinese families' household expenditure belongs to education, while the average of the eight countries surveyed (Brazil, China, India, Indonesia, Russia, Saudi Arabia, South Africa and Turkey) does not reach 10%. Education is the fourth item on which Chinese families spend their household money, after allocating 34% for savings, around 16% for food and around 14% for cars.

Family remains the main pillar of their children's education in terms of psychological and economic support. Even in the compulsory and free levels, parents pay for books and school material, and sometimes uniforms. Parents are not expected to cover the education fees for any compulsory levels, which are considerably high for average Chinese families. Concurrently, pressure can be high for parents as well as for students. Pupils' high achievements are understood in terms of parental good practices and family success (Huang and Gove, 2012). Still, according to Leung (2002, cited in Huang and Gove, 2012), high grades are not rewarded as in western countries, since Chinese parents are concerned that too much praise may have a negative effect on their children's achievement.

Chinese parents have high expectations of their children performance, give a high value to education and many still link education achievements with a future good living, which in turn is considered as a ladder leading to a higher social status (Zhang and Carrasquillo, 1995). On the other hand, when students do not obtain high grades, parents feel disappointed, anxious, and embarrassed (Kim, 2006, cited in Huang and Gove, 2012).

4.1.5.7. QUALITY CONTROL AND STANDARDS FOR HIGHER INSTITUTIONS

Quality in education has been a reiterated topic in Chinese policies since the 1990s, mainly focused on academic results and managed through the Ministry of Education concerning general matters and through the Higher Education Department of MOE for

undergraduate programmes, universities and colleges. Initiatives to measure institutions quality have been progressively changing and broadening the concept of quality and the instruments of control.

In 2004, the MOE opened the first specialized centre for evaluating education, the Higher Education Evaluation Centre (HEEC) of the Ministry of Education. This new evaluation body is responsible for organizing and monitoring quality programmes in higher education institutions. However, it is not an independent organism, since it is under the supervision and management of the MOE. China does not have private or external evaluation bodies assessing its institutions; however, it participates in international organizations, such as the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), and collaborates in specific quality programmes with several countries, such as Japan, Korea or Russia.

Before the foundation of the HEEC, the Chinese government was already evaluating the quality of its higher education institutions. According to Ping (2010), quality assessment in China has been divided into four stages. The first, from 1985 to 1994, was mainly a research process which was meant to be the beginning of a further development of national assessment guidelines for quality. During that stage, the content of the evaluation focused on guidelines, funds, teachers, majors, management, learning style, outcomes and characteristics. This first step in evaluating higher education institutions ended with universities in four different grades: excellent, good, pass and fail.

From 1994 to 2002, a new stage of higher education institution assessment was developed according to universities' characteristics: universities founded after 1978; key universities with a long history and good reputation and achievement; and regular universities with evaluation randomly chosen. In 2003 a five-year-round evaluation system began, and this was renovated in 2009.

From 2004, assessments of higher education institutions and workshop meetings between higher institution deans and department leaders, as well as the election of assessment experts, started to be carried out by the HEEC on a regular basis. That year, MOE released the *Basic Conditions Index for Colleges and Universities (Trial)* (MOE, 2004b), establishing specific quality benchmarks for higher education institutions. This document later became one of the basis for future assessment programmes, along with the *Undergraduate Teaching Level Assessment*

for Higher Education launched by MOE in 2011 (2011b), where 12 evaluation suggestions for undergraduate programmes are detailed.

The 2011 order designed an institutional self-evaluation system, in which institution assessment, programme accreditation, professional evaluation, international standards evaluations and basic academic data are included and routine monitoring processes are planned. The process also contemplates multiple evaluations from the government, the schools and specialized agencies. This order divides the assessment responsibility into two levels. On one hand, the Ministry of Education develops the main guidelines and policies to assess the quality of teaching basic standards, and coordinates, guides and supervises the assessments. On the other, education departments at provincial level, in accordance with State regulations and requirements and taking into account regional needs and peculiarities, organize and implement audit assessments through colleges and universities.

Since then, undergraduate evaluations have been triaged into two classes: qualified evaluations (or conformity evaluations), for newly built higher education institutions, and audit evaluations, for those institutions that have already passed the previous evaluation (Liu, 2012). This process has evolved coherently along the 2004 index categorization of institutions. The index gives two groups of institutions, regular and vocational, and establishes six kinds of institution in each group: comprehensive, teacher, and national institutions; engineering, agriculture and forestry; medical colleges; language, finance, and law schools; sports schools; and art colleges. The quality benchmarks are determined upon the type of institution, and the kind of evaluation. Normal universities' requirements are detailed in Annex 3.

Since 2011, conformity evaluations have also been regulated by the *Undergraduate Education of Conformity Evaluation* (MOE, 2011c), where an appendix details the seven indicators and their parameters towards the qualification of the institution. The indicators are (1) educational ideals and leadership role, (2) teachers, (3) teaching conditions and facilities, (4) curriculum and instruction, (5) quality management, (6) atmosphere and students' guide, and (7) teaching quality.

In 2013, based on the preceding documents and as an initiative to follow, assess and implement the Long-term Education Reform and Development Plan (2010-2020), MOE announced the *Undergraduate Teaching Audit Assessment* (MOE, 2013d), with an annex detailing the objectives and items to assess in post-qualified institutions (follow-up assessments).

Features to evaluate as considered quality elements are divided into six determined categories and a free design item: (1) location and institutional objectives, (2) teachers, (3) teaching resources, (4) teaching process, (5) student development and (6) quality assurance. A last category leaves institutions to add specific parameters for their own programmes and bodies. The complete collection of items is show in Annex 4.

4.2. SPAIN

4.2.1. TERRITORIAL, SOCIO-POLITICAL AND ECONOMIC FEATURES

The Kingdom of Spain is the official name of the country commonly known as Spain. The short term is used in this research, referring to the whole State. This country is located in the northern hemisphere, in southwestern Europe, on the Iberian Peninsula. Its mainland territory borders with four countries, one ocean and one sea. It borders with France, Andorra and the Cantabrian Sea to the north, with Portugal and the Atlantic Ocean to the west, the Mediterranean Sea to the east and the Atlantic Ocean, the Mediterranean Sea and Gibraltar (British overseas territory) to the south. The Spanish territory also includes two archipelagos, the Balearic Islands in the Mediterranean Sea, and the Canary Islands in the Atlantic Ocean, and two other enclaves on the coast of North Africa named Ceuta and Melilla.

The European Union website[45] confirms Spain's land mass to be 505,990.7 km^2, which places it in *The World Factbook* (database) ranking as the 52nd largest country in the world. Spain had, according to the collected data by the Spanish National Institute of Statistics (INE in its original acronym), a population of 46,771,341 of inhabitants in 2014, considered the 29th most populous country in the world (The World Factbook). Life expectancy is estimated to be 82.1 years. Spanish population growth is rather low (0.4), as is its fertility rate, 1.5. Spaniards living in urban areas represent 77.7% of the population, while 22.3% live in rural areas (UNDP, 2014).

Spain is constituted by 17 autonomous communities, and 2 autonomous cities (the aforementioned Ceuta and Melilla). Autonomous communities are divided into provinces (50 in total), and provinces are divided into municipalities.

[45]A complete Spanish profile can be consulted at: http://europa.eu/about-eu/countries/member-countries/spain/index_en.htm [November 16, 2015]

The capital city is Madrid, situated in the geographical centre of the Iberian Peninsula. Madrid is also Spain's most populous city, with 3,165,235 inhabitants, 6,052,247 including its metropolitan area.

Since the Spanish Constitution was ratified in 1978, the political system has been organized as a parliamentary monarchy (a social representative, democratic and constitutional monarchy), whose highest values are freedom, justice, equality and political pluralism (Article 1). Universal suffrage from age 18 takes place every four years (Article 68). The constitution guarantees freedom of ideology and religion, and designates the nation as a non-denominational State (Article16). However, historically, Spain has mainly been a Catholic country. Nowadays, according to the 2014 Spanish Centre for Sociological Research (CIS in its original acronym), 67.8% of the population is Catholic, 27.6% is non-religious or atheist, 2.3% profess other religions and 2.3% were not stated.

Spanish is the national official language and is, according to Ethnologue (Lewis, Simons and Fennig, 2015), the world's second most spoken language by number of native speakers. Some autonomous communities have co-official languages, such as Catalan in Catalonia, the Balearic Islands, and the Valencian Community, Galician in the Autonomous Community of Galicia, or Basque in the Autonomous Community of Basque Country.

Since 1999, the Spanish currency, as the official currency of the Eurozone, has been the Euro (€ or EUR). According to the European Central Bank, the average equivalence of one Euro was, from 6 May 2014 to 7 May 2015, 1.2419 US$.[46] In 2009, after a 16-year economic[47] growth trend, the Spanish GDP started to contract, and the country began to experience a prolonged recession process in consonance with the global financial crisis. Its GDP continued to contract through most of 2013. According to the International Monetary Fund, the Spanish GDP at Purchasing Power Parity (PPP) slowly rose from US$1,061 billion in 2002 to US$1,485 billion in 2012, and reached 1,533 billion in 2014, ranking 17th worldwide. In 2013, the Spanish nominal GDP placed the country 13th on the international list[48] (IMF).

[46] In this research, equivalence between the Euro and Dollar taken as an exchange rate of 1.24.
[47] As in the Chinese section, the economic data has been collected from the *World Factbook*, with its main source the World Bank and other statistical agencies. This resource offers a standardized analysis including both countries of this research, and worldwide rankings. All rates are in 2013 US Dollars ($).
[48] Data from 2013. Source: United Nations, IMF and the World Bank official website.

Spain had a GDP per capita (PPP) of US$30,100, dropping to 57th place in the international ranking. The Spanish labour force is 23.2 million (29th in the international ranking), of which 71.7% are dedicated to services, 24% to industry and 4.2% to agriculture. It had, in 2013, a high 26.3% unemployment rate, assigning this country 175th place when globally comparing the lowest unemployment rates.

The minimum salary is established each year by law; in 2015 it reached US$727 (€648) per month. The Spanish average net salary is, according to Adecco (2015), US$1,833 (€1,634) monthly. The *World Factbook* estimates 21.1% of the population to be living below the poverty line, according to national standards, which corresponds to a wage of, approximately, US$8,243 per year (around 7,297 Euros). Nonetheless, the 2014 Human Development Index includes Spain in the very high human development group (27th in the international raking), with a value of 0.869 (UNDP, 2014).

According to the UNDP, the Spanish average mean years of schooling is 9.6 and expected average years of schooling is 17.1 (UNDP, 2014). In 2014, the educational budget was €46,072. 2 million, equivalent to approximately US$57,129.28 million, which corresponded to 4.43% of the Spanish GDP. The highest contribution to the educational field in the last decade was made in 2009, covering 5.07% of the GDP with €53,060.1 million (near US$65,794.4 million). Since that year, expenditure on education has kept lowering more than half a point. Evolution in this matter has noticeable bounced in the last decade; however, the percentage for 2014 matches that for 2004 (4.43%) (MECS, 2014a).

4.2.2. SPAIN IN THE WORLD

Spanish international involvement was drastically determined by a 36-year right-wing military dictatorship, led by General Franco, which started after the Spanish Civil War (1936-1939) and lasted until the death of Franco in 1975. Concurrently, during that time, the world overcame a global war, and entered a period of growing, peace and harmonization through the foundation of international organizations.

At the beginning of that period, Spain's relationship with Europe was rather fluid, since the Fascists in Italy and Nazis in Germany supported the regime. Later, during World War II (1939-1945), Spain officially remained a non-belligerent country, though helping the Axis

powers.[49] Nevertheless, after World War II when both the Fascists and Nazis were defeated by the Allies, Spain remained isolated from both Europe and the international context.

When the UN was founded in 1945, Franco's regime was not legitimized by the international community. In 1946, the UN urged its members to break diplomatic relations with Spain, isolating the country from international trades or exchanges. As a result, Spain was the only major country of Western Europe which was not included in the European Recovery Programme, known as the Marshall Plan (1948-1951); this plan was later considered to be the first initiative to facilitate global trade and free markets, and to encourage European integration and peace (Boundless, 2014).

This situation lasted until USA reconsidered its position, wanting Spain as a strategic territory in which to place American military bases and as an anti-communist ally in the Cold War. The Pact of Madrid, in 1953, started the end of the isolation period. Two years later, in 1955, Spain finally came to be a UN member. Since 1953, Spain has become a member of numerous organizations such as UNESCO (1953), the International Labour Organization (1956), the International Atomic Energy Agency (1957) and the International Monetary Fund and the World Bank, both in 1958.

The country was also banned from becoming a member of the North Atlantic Treaty Organization (NATO), founded in 1949, and its applications to become a European Economic Community member were constantly rejected. Spain had to wait until the restoration of democracy (Franco died in 1975, the first elections were celebrated in 1977 and the Constitution was signed in 1978), to enter both organizations, NATO in 1982 and the European Economic Community in 1986.

Gradually, the process of Spanish openness began, and with it, its inclusion in the European Economic Community, which in turn, started a fast progression in economic recovery. Nowadays, Spain is, according to the UN Committee on Contributions (2014), the 9th largest UN donor among all member countries, providing 2.973% of the total UN budget in 2015.

Spain participates in all of the UN organizations and bodies. For instance, it became a member of the United Nations World Tourism Organization (UNWTO) in 1975, of the

[49] The Axis powers refer to Germany, Italy, Japan, Hungary, Romania and Bulgaria, while the Allies refer to the USA, UK, France, USSR, Australia, Belgium, Brazil, Canada, China, Denmark, Greece, Netherlands, New Zealand, Norway, Poland, South Africa and Yugoslavia.

United Nations Industrial Development Organization (UNIDO) in 1985, of the Organisation for the Prohibition of Chemical Weapons (OPCW) in 1997, and of the World Trade Organization (WTO) in 1995. Spain has been elected to be a member of the Security Council four times and was one of the top 10 providers of assessed contributions to UN Peacekeeping operations in 2013-2015, with a weight of 2.97%.

Regarding the international economic field, in terms of both the International Monetary Fund (2015) members' quotas and voting power, Spain ranks 15th out of the 188 countries, with a total percentage of 1.69% value in quotas and 1.63% in voting power. Spain is not a member of the G7 or the G20; however, as explained above, it is the 13th larger economy of the world in terms of nominal GDP, which has led to numerous criticisms about Spain being left out of the G20, as it has a stronger economy than seven of the members (Argentina, Mexico, Saudi Arabia, South Africa, South Korea, Indonesia and Turkey). The main reasons refer to the fact that the G20 already has four European members and the EU, and therefore another European country will make the situation too imbalanced towards occidental economies. Instead, Spain has been considered as permanent guest, and has participated in the seven G20 extraordinary summits and in several ordinary meetings. Spain is a member of the G6, a European Union group of Interior Ministers from the six largest countries in the EU (Germany, France, UK, Italy, Spain and Poland), who meet twice a year. The total amount of the percentages of these countries in the Council of the EU is 49%.

Concurrently, Spanish participation in the social, educational and cultural fields has also been growing, and it is equivalent, in most of the cases, to its economic international place. It reaches 16th place among the donors of the UN Refugee Agency (UNHCR, 2012) and 11th out of the top 20 contributors to UN Women (UN Women, 2013), but drops to 25th place in the World Food Program (UN Food Program, 2015).

Spain was one of the founding members of the OECD in 1961, and of the Development Assistance Committee (DAC) in 1991. However, its participation was rather limited until the beginning of democracy. As a member, Spain can have access to and participate in equal international cooperation, establishing global standards of good practice in several fields, such as sustainable development, quality of public administration, financial markets and education.

In 1953, Spain joined UNESCO. There are currently 72 UNESCO chairs in Spain, of which ten focus on education. Four of them are in Catalonia, (Education and Technology

for Social Change, Higher Education Management, Education, Development and Technology, and Languages and Education), two in Madrid (Higher Education Management and Policy, and Education Sciences in Latin America and the Caribbean), two in the Basque Country (Sustainable Development and Environmental Education, and Communication and Educational Values) and, two at the National University of Distance Education (Distance Education and Environmental Education).

4.2.3. SPAIN AS A EUROPEAN UNION MEMBER

As explained in the theoretical framework, the process of building a European Union as it is known today began in 1950 with the Schuman Declaration which finally led to the creation of the European Coal and Steel Community in 1951. Six years later, in 1957, the Treaty of Rome[50] broadened the objectives and renamed the coalition to the European Economic Community (EEC). Conversely to the fast evolution of alliances in Europe, the initiative of Spain to participate in European synergies had to wait twenty years, until in 1977, along with the establishment of a democratic political system, Spain submitted an EEC membership application. However, the Treaty of Accession was not signed until 12 June 1985, and did not come into force until 1 January 1986. Portugal also became part of the EEC that year. Therefore, since 1986 Spain has been a full member of the EEC, participating in its multiple (economic, social, cultural, legislative) initiatives. The European Union was formally established when the Maastricht Treaty, signed in 1992, came into force on 1 November 1993.

Eurostat, the statistical office of the European Union, calculated European Union inhabitants at 507,416,607, distributed among 28 Member States. This represents about 7% of the global population. The total surface area is 4,381,376 km^2, which ranks the 7th largest territory in the world. The most populous countries are Germany (81 million), France (66 million), the UK (64 million), Italy (61 million) and Spain (46 million). Added up, the population of these five countries represent approximately 63% of the total European population. Spain's territory represents 11.4% of the total European area, and 9.17% of the EU population.

[50] Officially the Treaty Establishing the European Economic Community (TEEC) entered into force on 1 January 1958 and was signed 25 March 1957 by the 6 country members: Belgium, France, Italy, Luxembourg, the Netherlands and West Germany. This treaty later developed into the Treaty on the Functioning of the European Union, which entered into force alongside the Treaty of Lisbon in 2009.

The International Monetary Fund estimated the European Union's GDP (PPP) to be US$16.773 trillion in 2014, and its average GDP per capita (PPP) to be US$32,152. Regarding the nominal GDP, Spain is the 5th largest economy in the European Union, behind Germany, France, the UK and Italy. That same year, Eurostat calculated that the labour force in the European Union included 240.2 million people, and the unemployment rate was 10.4% (Eurostat).

According to Inequality Watch (2010), 16.4 % of the population of the EU lives below the poverty line. However, in this case, it is relatively difficult to determine the real meaning of the poverty line, since as Eurostat confirms, monthly minimum wages widely vary. Minimum wages start from €184 (US$228) in Bulgaria to €1,923 (US$2,384) per month in Luxembourg. However, the Human Development Index 2014 (UNDP, 2014), which offers a more comprehensive measure, places all European Union members in the very high human development group, except Bulgaria and Romania, which belong to the high human development group.

This supranational organization integrates multiple institutions and bodies. Article 13 of the European Union Treaty, or Treaty of Maastricht, determines seven institutions: European Parliament, European Council, the Council of the European Union, the European Commission, the Court of Justice of the European Union, the European Central Bank, and the Court of Auditors. The functions of each institution and Spain's participation or role are explained on the EU website, as described below:

European Parliament: formerly known as the European Parliamentary Assembly or Common Assembly. This institution exercises (in conjunction with the Council of the EU and the European Commission), the legislative function of the EU. Its three main roles are: debating and passing European laws, debating and adopting the EU's budget (both roles are shared with the Council of the EU), and scrutinizing other EU institutions to make sure they are working democratically.

The Parliament is organized through commissions, one of which is dedicated to education and culture. Since 1979, the members of the Parliament has been directly elected by EU voters every 5 years, and represent "the voice of the people". It is the only directly elected body of the seven European Union institutions. In 2014, the Parliament was integrated by 751 Members representing 500 million European citizens.

According to the European Union website, this institution represents the second largest democratic electorate in the world (after the Parliament of India) and the largest transnational democratic electorate in the world. Currently there are 54 Spanish members of the European Parliament. The Parliament has been chaired by Spanish members on three occasions.

European Council: this institution acquired a formal status after the Treaty of Maastricht in 1992, and currently defines the European Union's broad main concerns and political priorities. The European Council sets policy agendas detecting issues of concern and actions to take, mainly regarding foreign affairs and security policies, economic and political issues and judicial cooperation in criminal matters. However, it cannot negotiate or adopt laws, since it does not belong to the legislative branch.

The members of the European Council are the Heads of State or government of each of the Member States. The Spanish member is the President of the Government, who changes every four years. Decisions are mostly taken by consensus, or in specific cases, like the selection of their President, the selection of the candidate to head the European Commission or the President of the European Central Bank, by unanimity or by qualified majority.

Council of the EU: The Council represents the Member States' governments, and therefore in their meetings each country defends their own national interests. National ministers meet to adopt laws and coordinate policies, in ten different topics (culture and fisheries, economic and financial affairs, environment, etc.). The configuration concerning education encompasses education, youth, culture and sport.

The Council passes European laws, coordinates broad economic policies, signs agreements between the EU and other countries, approves the annual EU budget, develops the EU's foreign and defence policies and coordinates cooperation between the courts and police forces of Member States. Members depend on the field of the meeting; the attendants are ministers related to the topic.

As mentioned, Spanish ministers attend this meeting, representing 9.17% of the EU population. Spain has held the presidency of this institution four times between 1989 and 2010.

European Commission: this institution looks after the interests of the EU as a whole, being the executive body of the EU. Its main roles are to propose legislation, enforce European laws, set objectives and priorities for action, manage and implement EU policies

and budget, and represent the EU outside Europe. Its members are appointed by national governments, and selected by the President-elect of the European Commission.

All 28 countries are represented; the system is structured according to one President, seven Vice-Presidents and twenty Commissioners. Though the headquarters are in Brussels and Luxembourg, the Commission has representations in all EU Member States and 139 Delegations across the globe. There are two offices in Spain, in Madrid and Barcelona.

Court of Justice of the European Union: The Court of Justice comprehends the whole judiciary system. It is seated in Luxembourg, and ensures that all EU countries apply EU legislation the same way. It settles legal disputes between EU governments and EU institutions, and between individuals, companies or organizations, if their rights have been infringed by an EU institution. The Court of Justice has one judge per EU country. There have been 10 presidents since 1952, of which one has been Spanish (1994–2003).

European Central Bank: The European Central Bank is based in Germany. It safeguards price stability in the EU, manages the Euro, cooperates with central banks in the 28 countries and administrates the monetary policy of the Eurozone. The Eurozone refers to the 19 EU countries that share the Euro as currency. Spain has been a Eurozone member since 1 January 1999.

Court of Auditors: this is the institution responsible for auditing EU finances. Its headquarters are in Luxembourg and it has the right to check any person or organization handling EU funds. The Court has one member from each EU country. The Court of Auditors had a Spanish President from 2002 to 2006.

Besides Spanish participation in the European Union through these institutions, Spain has permanent representation in Brussels. The Spanish bureau in Brussels aims to ensure the country's interests and policies.

The European Union valued the total Spanish contribution to the EU budget at €9.662 billion (US$11.98 billion) in 2012, and total EU spending in Spain at €14.257 billion (US$17.67 billion). The distribution of the EU budget is not equal for every European nation, since the Union looks to cover the needs of all Europeans as a whole. In Spain, most of the budget is designated to agricultural policy, job creation and cross-border cooperation.

Funds aim to tackle youth unemployment, to cover infrastructures and research plans. To a lesser extent, social funds also finance social inclusion policies, research and scientific development and education programmes. For instance, these funds have been used to

develop the Erasmus Scholarship, the European Voluntary project and the Leonardo Scholarship. Some of these initiatives have been possible thanks to previous European efforts attempting to harmonize their educative systems through the EHEA, already mentioned in the theoretical framework. The next section goes into depth about the European educative guidelines in which Spain, as a European member, is actively involved.

4.2.4. EDUCATION GUIDELINES IN THE EUROPEAN UNION

Contemporary Spanish education policies cannot be understood outside the common European framework. The next section briefly tackles European education guidelines, including education policy development, deepening into the implementation of the European Higher Education Area, and outlining the educative agenda and guidelines that are expected until 2020.

Overview of European Union education policy development

Since its origins, the EU has conceived supranational cooperation in the field of education as a cornerstone of improving its competitiveness as a knowledge society. The already mentioned Treaty of Rome (1957) inspired members to coordinate their efforts in the spheres of vocational training and to promote close cooperation among Member States in the social field, including basic and advanced vocational training, social security and employment, vocational retraining and the agreement to lay down general principles for implementing a common and harmonious vocational training policy (Articles 41, 118, 125 and 128).

Almost 20 years later, the first European programme in the field of education was born. In 1976, a Resolution of the Council and the Ministers of Education comprising an action programme in the field of education represented the first step in the development of the future European educative policies. This resolution marked six main goals and the measures to implement them. The goals are:

1. Better facilities for the education and training of nationals and the children of nationals of other Member States of the Community and of non-member countries.
2. Promotion of closer relations between educational systems in Europe.
3. Compilation of up-to-date documentation and statistics on education.
4. Cooperation in the field of higher education.

5. Teaching of foreign languages.

6. Achievement of equal opportunity for free access to all forms of education.

The programme has already made some references and improvements towards the topic of this study. Point 2 aims to promote short study visits and exchanges for teachers and pupils in primary and secondary schools, supported contacts between the authorities of establishments concerned with teacher education and educational activities with European content. In addition, Point 4 encourages free movement and mobility of teaching staff, students and researchers, and promotes Member States to arrange discussions in order to develop common policies for student admission and to eliminate obstacles to mobility.

The Treaty of Rome was amended by the Single European Act (1986), which was in turn amended by the Maastricht Treaty. Valle (2006) highlights the strong impact of the Single European Act, which planned the full establishment of the interior market (and therefore the right of free movement inside the European area) by 1993. The impact, argues the author, can be noticed through the implementation of numerous educative programmes between the Single European Act and the Maastricht Treaty: COMETT (1986), PETRA (1987), IRIS (1987), ERASMUS (1987), DELTA (1988), LINGUA (1988), etc.

A new period began with the Maastricht Treaty (1992). Besides changing the EEC's name to the European Union, this treaty led to the creation of the Euro as a common currency. In the educative field, the Maastricht Treaty urged Community activities to include a contribution to education and training of quality and to the flowering of the cultures of the Member States (Article 3). Final responsibility in the educational field belongs to each of the Member States, while the European Union takes a supportive role, as is explained in Article 126:

> "The Community shall contribute to the development of quality education by encouraging co-operation between Member States and, if necessary, by supporting and supplementing their action, while fully respecting the responsibility of the Member States for the content of teaching and the organization of education systems and their cultural and linguistic diversity." (European Union, 1992, p. 28)

To support and encourage the improvement of the educative systems in all European countries, the Treaty stresses the core EU aims (Articles 126.2 and 127.2): the development of the European dimension of education highlighting teaching and dissemination of European languages, stressing teacher and student mobility and qualifications, promoting

cooperation and information exchange between education systems, endorsing youth exchanges and participation in European democratic life, encouraging the development of distance education, improving initial and continuing vocational training, and stimulating cooperation between educational or training establishments and firms. Further amendments to the Maastricht Treaty were made by the treaties of Amsterdam (European Union, 1997), Nice (European Union, 2001a) and Lisbon (European Union, 2007a).

The Lisbon Treaty (2007),[51] in its Article 165, and the Consolidated Version of the Treaty on the Functioning of the European Union (European Union, 2012a), in its Articles 166 and 167, reaffirmed the Maastricht principles and determined, according to the Treaty of Amsterdam, that the EU will promote the development of knowledge through wide access to education and continuous updating. Some core concepts, such as lifelong learning, professional skills and personal competencies, emerged.

Pursuing these aims, the Member States develop and participate in educative programmes which allow EU citizens to live, study and work in other European countries. Teacher, student and researcher mobility became one of the flagship policies in the EU, materialized through the well-known Erasmus programme for higher education mobility and lifelong learning, the Leonardo Da Vinci programme for vocational training, and the Comenius programme for primary and secondary education, among others.

European Higher Education Area

Mutual recognition of academic qualifications and mobility have been a concern since the creation of the now-called European Union, as demonstrated by several conventions and initiatives such as *The European Convention on the Equivalence of Diplomas leading to Admission to Universities* (1953), the *European Convention on the Equivalence of Periods of University Study* (1956), the *European Convention on the Academic Recognition of University Qualifications* (1959), the *Convention on the Recognition of Studies, Diplomas and Degrees concerning Higher Education in the States belonging to the Europe Region* (1979) and the *European Convention on the General Equivalence of Periods of University Study* (1990).

In 1997, the *Convention on the Recognition of Qualifications Concerning Higher Education in the European Region* was held in Lisbon by the Council of Europe in collaboration with UNESCO. The agreement included definitions (higher education, period of study, qualifications, recognition and requirements), basic principles related to the assessment of qualifications,

[51] The Treaty of Lisbon was signed on 13 December 2007 and entered into force on 1 January 2009.

recognition of qualifications giving access to higher education and recognition of higher education qualifications, among others. However, it was not until a year later that the roots of the European Higher Education Area started to grow deeper.

In 1998, the *Sorbonne Joint Declaration* was signed in Paris, by the ministers of France, Germany, United Kingdom and Italy. These countries realized that Europe was growing unevenly, centring on the economy and somehow ignoring knowledge and culture. The goal was to harmonize higher education systems, creating a common framework, the EHEA, to determine qualification recognition, to strengthen and build upon the intellectual, cultural, social and technical dimensions and "to remove barriers and to develop a framework for teaching and learning, which would enhance mobility and an ever closer cooperation" (Paragraph 4).

To ease international recognition, comparison and equivalence, the declaration proposed a two-cycle system (undergraduate and graduate) and the use of credits and semesters. Initially, graduate cycles were conceived as a choice between a short-period Master's degree and a long-period Doctoral degree.

The aims of the Sorbonne Declaration were ratified when the *Bologna Declaration* (European Union, 1999) was signed on 19 June 1999, by ministers responsible for higher education from 29 European countries. In that document, six primary relevance objectives, which later affected Spanish system of teacher education, were established:

- Adoption of a system of easily readable and comparable degrees.
- Adoption of a system essentially based on two main cycles: undergraduate (minimum 3 years) and graduate (which lead to the Master's or Doctoral diploma).
- Establishment of a system of credits, such as in the European Credit Transfer and Accumulation System (ECTS).
- Promotion of mobility for students, teachers, researchers and administrative staff.
- Promotion of European cooperation in quality assurance with a view to developing comparable criteria and methodologies.
- Promotion of the necessary European dimensions in higher education, particularly with regard to curricular development, interinstitutional cooperation, mobility schemes and integrated programmes of study, training and research.

As a follow-up strategy, since the Bologna Declaration, Ministerial Conferences have been taken place every two years. Until the present date, seven conferences have been held: the Prague Communiqué (European Union, 2001b), Berlin Communiqué (European Union, 2003), Bergen Communiqué (European Union, 2005a), London Communiqué (European Union, 2007b), Leuven/Louvain-la-Neuve Communiqué (European Union, 2009), Budapest-Vienna Declaration (European Union, 2010) and Bucharest Communiqué (European Union, 2012b).

The Prague Communiqué assessed the achievements of the aforementioned objectives; for the first time the topic of social dimension came into focus as well as the stressing of lifelong learning as an essential element of the EHEA. It also highlighted the important role of students in collaboration with universities or other higher education institutions and the importance of enhancing the attractiveness of European higher education. On that occasion, the ministers reaffirmed their commitment to establish the EHEA by 2010.

In 2003 the Berlin Communiqué added a third cycle, the Doctoral degree, and all ministers committed themselves to start the implementation of the two-cycle system by 2005. ECTS became not only a transfer but also an accumulation system, and the use of ECTS started to spread in the EU. This communication highly focused on the importance of quality, and determined three priorities to set for the next two years: quality assurance, two-cycle system and recognition of degrees and periods of study.

During the next follow-up meeting, the Bergen Communiqué (European Union, 2005a), the EU stressed again the three cycle structure and a proposal to delimit generic descriptors for each cycle based on learning outcomes and competencies. It also tackled the use of credit ranges in the first and second cycles, and the commitment of elaborating compatible national frameworks for qualifications, starting by 2007.

The same year, the *Framework of Qualifications for the European Higher Education Area* (European Union, 2005b) was adopted. Full homogeneity was not reachable, since every country's quality assurance system should be respected; however, this framework planned first cycle degrees corresponding to 180-240 ECTS credits, second cycle qualifications from 90 to 120 ECTS credits (the minimum requirement should amount to 60 ECTS credits at second cycle level) and third cycle qualifications do not necessarily have credits associated with them. Currently, one credit point is usually equivalent to 25 to 30 hours of workload, and generally, a tariff of 60 credits is established per one full year.

The framework strongly endorsed principles of quality, adopting the *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (first released in 2005, the last edition was released in 2014 by ENQA), promoted transparency and determined four objectives: implementation of the standards and guidelines for quality assurance as proposed in the European Association for Quality Assurance in Higher Education (ENQA) report; implementation of the national frameworks for qualifications; awarding and recognizing joint degrees, including at doctorate level; and creating opportunities for flexible learning paths in higher education, including procedures for the recognition of prior learning.

Besides the evaluation of all previous objectives, two years later the London Communiqué (2007) underlined the importance of curricula reforms in order to better suit qualifications, labour market needs and access to further studies. It also remarked on the need for the proper implementation of ECTS based on learning outcomes and student workload.

In 2009, the Leuven/Louvain-la-Neuve Communiqué was released, as a prelude to the programme for the next decade. Priority areas were set, including the social dimension, lifelong learning, employability, student-centred learning and the teaching mission of education, international openness, mobility, education, research and innovation, among others.

Specifically, regarding teachers, Article 20 states, "Attractive working conditions and career paths as well as open international recruitment are necessary to attract highly qualified teachers and researchers to higher education institutions. Considering that teachers are key players, career structures should be adapted to facilitate mobility of teachers, early stage researchers and other staff; framework conditions will be established to ensure appropriate access to social security and to facilitate the portability of pensions and supplementary pension rights for mobile staff, making the best use of existing legal frameworks" (p. 4).

Finally, the Budapest-Vienna Declaration officially launched the EHEA in 2010. At that time, 47 countries (EU and non-EU members) participated in the project. The main objectives of the Bologna Process were accomplished, and the EHEA entered its implementation phase.

The last assembly was hosted in Romania in 2012 and planned the next follow-up meeting, and some policy deadlines for 2015 in Yerevan (Armenia). The Bucharest Communiqué (2012) set out the priorities for the next 2012-2015 triennium at a national and European level, mainly focusing on quality, transparency, mobility, employability, lifelong

learning, problem-solving and entrepreneurial skills. Among other priorities, it also promoted the implementation of the qualifications framework, the development of a peer learning project on the social dimension of higher education, and the development of guidelines for transparency policies.

Teacher education and European guidelines

As explained in the preceding section, the beginning of the 21st century represented a remarkable milestone in the development of common policies on education. Since the Bologna Declaration, European agendas have been tracking and promoting the implementation of common-core standards. The application of the two main agendas is divided into two 10-year periods. The first, under the *Education and Training 2010* framework, covers 2000-2010, and runs alongside the implementation of the EHEA. The second, *Education and training 2020*, is the current European action framework and covers 2010-2020. This section analyses the content of both agendas concerning teacher education.

- 2000-2010. Education and training 2010 (ET 2010)

A significant breakthrough in European education policies related to teacher education, came when the Lisbon European Council (2000) planned a programme of reforms to make the EU the most competitive and dynamic knowledge-based economy in the world by 2010.[52] This plan is known as the Lisbon Strategy, the Lisbon Agenda or the Lisbon Process, and took place from 2000 to 2010. It aimed to build knowledge infrastructures, to enhance innovation and economic reforms, to modernize social welfare and education systems, to raise citizens' educational level and to promote lifelong learning opportunities. The Council emphasized the need to adapt education and training systems to the knowledge society by targeting specific groups (young people, unemployed adults and employed adults who need to refresh their skills) and therefore the need to offer particular learning opportunities. It focused on three goals: the development of local learning centres, the promotion of new basic skills (mainly ICT), and the increase in qualification transparency.

As a result of the Lisbon Strategy, the Commission of the European Communities (2001) launched *The Concrete Future Objectives of Education Systems* report. The specific guidelines of this initiative were: raising the standard of learning in Europe, making access to learning easier and more widespread at all times of life, updating the definition of basic skills for the

[52] The Lisbon strategy and agenda, as well as the Europe 2020 timeline, can be further consulted at: http://ec.europa.eu/archives/growthandjobs_2009/ [December 12, 2015]

knowledge society, opening education and training to the local environment, to Europe and the world, making the best use of resources, and developing a new partnership with schools. A new era, where educative goals were constantly assessed, began.

The report determined 13 specific objectives, of which "improving training for teachers and trainers" was placed first. The Commission indicated that "upgrading the initial and in-service training of teachers and trainers so that their skills respond both to the changes in society and expectations, and to the varied groups involved […] is a major challenge to the education systems over the next 10 years" (p. 6). This document also linked teacher education (called training in this case) to the motivation of learners and their success, and took into consideration the need to address the issue of teachers' status and career attractiveness.

In 2002, at the Barcelona European Council meeting, the "Education" Council and the Commission approved a work programme to follow up the objectives of education and training systems in Europe. At that time, secondary and teacher education were highly promoted. The key issues related to teachers were:

- Identifying the skills that teachers and trainers should have, given their changing roles in the knowledge society;

- Creating conditions which adequately support teachers and trainers as they tackle the challenges of the knowledge society, from the point of view of lifelong learning;

- Ensuring that a sufficient number of people enter the teaching profession, across all subjects and at all levels, as well as providing for the long-term needs of the profession by making it more attractive;

- Attracting recruits to teaching and training who have professional experience in other fields;

- Securing a sufficient number of qualified teachers, mainly in the fields of mathematics, science and technology at secondary level.

The EU was focusing on knowledge as key for modern societies, lifelong learning approaches to maintain and improve societies and tactics to make teaching an attractive career. Concerns and strategies about the need to attract teachers at all levels and in all subjects were concentrated on the sciences and secondary education. Alongside these key issues, the plan settled the main educative objectives and indicators for the next decade. Table 4.12 summarizes all the objectives and indicators directly related to teacher education and/or secondary education.

Table 4.12: Secondary education and teacher education references in the European work programme (2002). Future ET 2010 framework

Strategic and associated objectives	**Indicators for measuring progress**
Improving education and training for teachers and trainers Starting period: during 2002	- Shortage/surplus of qualified teachers and trainers on the labour market. - Progression in number of applicants for training programmes (teachers and trainers). - Percentage of teachers and trainers who follow continuous professional training.
Developing the skills needed for a knowledge society Starting period: second half of 2001	- People completing secondary education, - Continuous training of teachers. - Percentage of adults failing to complete upper secondary education who have participated in any form of education or training, by age group.
Ensuring access to ICT for everyone Starting period: second half of 2001	- Percentage of teachers that have been trained in ICT use in schools.
Increasing recruitment to scientific and technical studies Starting period: second half of 2001	- Increase in number of entries into mathematics, science and technology courses (upper secondary advanced levels and tertiary levels, by gender), - Increase in number of qualified teachers in the fields of mathematics, science and technology (secondary level).
Improving foreign language learning Starting period: between the second half of 2002 and the end of 2003	- Percentage of language teachers having participated in initial training or in-service training courses with a mobility element providing direct contact with the language/culture they teach.

Source: Researcher's original compilation and adaptated from European Council and European Commission (2002)

In 2004, these objectives were integrated into a policy framework officially called *Education and Training 2010* (ET 2010). The joint report adopted by the Commission and the Council aimed to measure the success of the Lisbon Strategy and to propose urgent

reforms (European Council and European Commission, 2004). The three central purposes of ET 2010 were to develop a lifelong learning paradigm across all Europe, to enhance mobility for teachers and students, and to carry out higher education reforms. As an investment in a key area, the report claimed the need to make the teaching profession a more attractive career, evidences the vital role of higher education in training teachers and anticipates a massive regeneration of teaching staff as a challenge and an opportunity for improvement.

In this document, the EU was already encouraging its members to "implement measures to make the teacher/trainer profession more attractive. This includes steps to attract the best talents to the profession and to retain them, including through attractive working conditions and adequate career structure and development" (p. 25), and to apply common European references and principles as common key competencies and teachers' competencies (deepened in Section 5.2.6) and qualifications (tackled in Section 5.2.7).

As consequence of this process, the *Common European Principles for Teacher Competences and Qualifications* was published in 2005 (European Commission, 2005). It described the vision of the European teaching profession around four characteristics: a well-qualified profession, a profession for lifelong learners, a mobile profession, and a profession based on partnership. To develop these characteristics, the EU set up common policies to be applied at the national or regional levels. Policies were proposed around four asseverations.

- The teaching profession should be well-qualified: teachers should be graduates from a higher education institution, and teacher education programmes should be delivered in all three cycles of higher education (described in the Bologna Process).
- The teaching profession should be seen as a continuum which includes initial teacher education, induction and continuing professional development: formal and non-formal education should include subject-based and pedagogical training, and education should reflect the importance of interdisciplinary and collaborative approaches to learning.
- Teacher mobility should be encouraged: initial and continuous education should promote mobility projects, European cooperation, opportunities to learn European languages and mainly the development of greater trust and transparency of teacher qualifications within Europe which allow mutual recognition and increased mobility.
- The teaching profession should work in partnership with other stakeholders.

The European Union also needed to establish specific indicators to measure the Member States' educative achievements towards the Lisbon Agenda. In this regard, a Communication from the Commission (2007a) was released. The indicators and benchmarks were centred on eight key policy domains.[53]

Various indicators directly affected teachers and their education, such as modernizing higher education, targeting the reforms made after the Bologna Process, or modernizing school education, pursuing the improvement of initial teacher education quality when affirming that "The quality of school education depends on improving the initial training of teachers […]".

As the literature shows, at the end of the decade teachers' quality and education was becoming a central concern in the EU. In 2007 a proposal for benchmarks was released. *Improving the Quality of Teacher Education* (European Union, 2007b) analysed European trends in teacher education, and finally proposed a framework for action. Policy suggestions backed *The Common European Principles for Teacher Competences and Qualifications* (European Union, 2005) and reiterate the need for a lifelong learning paradigm. It also recommended specific necessary skills for teachers, urging them to develop reflective teaching practice and research. It encourages countries to set teacher qualifications and education in higher education institutions, allowing teachers to accede to the highest level of education.

The guidelines for future actions aim to ensure that teacher education belongs to a well-coordinated, coherent and adequate system, where teachers possess a full range of subject knowledge, attitudes and pedagogic skills. It also promotes the professionalization of teaching, endorsing teachers' status and recognition, and the creation of teacher education programmes at Master's and Doctorate levels.

These suggestions continued to be included and deepened during the decade. In 2008, the Council of the European Union (2008b) published a report detecting profession attractiveness and professional preparation as one of the main challenges in teacher education. In secondary school, upper secondary attainment and key competencies continued to be the major problematic areas.

[53] (1) Making education and training fairer; (2) promoting efficiency in education and training; (3) making lifelong learning a reality; (4) key skills for young people; (5) modernizing school education; (6) modernizing vocational education and training; (7) modernizing higher education; and, (8) employability.

In the same year, *Preparing Young People for the 21st Century: an Agenda for European Cooperation on Schools* (Council of the European Union, 2008a), remarked on the need to increase EU country members' cooperation on (1) enhancing the attractiveness of teaching as a profession, (2) enabling all beginning teachers to benefit from structured early career support programmes, (3) improving the supply, quality and take-up of teachers' continuous professional development programmes, (4) reviewing teacher recruitment, placement, retention and mobility policies, in order to maximize their impact on the quality of school education, (5) expanding opportunities for teachers to spend a period of time in another Member State, and (6) improving the recruitment and training of school leaders.

One year before the expiration of the programme, in 2009, after assessing the advances and deficiencies of the precedent initiatives, and as a continuation of ET 2010, the Council and the Commission launched Education and Training 2020 (ET 2020).

- 2010-2015. Education and training 2020 (ET 2020)

The Council of the European Union determined in 2009 the new strategic framework for European cooperation in education and training, setting out four strategic objectives. To achieve these objectives and improve the efficiency of the framework, the EU identified priority areas for specific work. All four objectives and priority areas are related to teachers, and their education. The table below shows the information related to teachers and the content in which their education should be built. The impact of this proposal on the teacher education system in Spain is tackled in Section 5.2., and the consequences and specific guidelines for Spain in Section 4.2.5.2.

Table 4.13: ET 2020, objectives and priorities related to teachers and their education

Strategic objective	Specific objectives and priority areas
Making lifelong learning and mobility a reality	- Implementation of lifelong learning strategies. - Education and training systems more responsive to change and open to the wider world. - Development of national qualifications frameworks based on relevant learning outcomes and their link to the European Qualifications Framework. - Establishment of more flexible learning pathways. - Periods of learning abroad for teachers and teacher trainers (ruled by the European Quality Charter for Mobility). Priority Area: Use of an approach based on learning outcomes for standards and qualifications, assessment and validation procedures, credit transfer, curricula and quality assurance.
Improving the quality and efficiency of education and training.	- High quality education and training systems which are both efficient and equitable. - Acquisition of key competencies[54] by everyone. Raising the level of basic skills. - Ensuring high-quality teaching. - Providing adequate initial teacher education and continuous professional development for teachers and trainers. - Making teaching an attractive career choice. - Improving the governance and leadership of education and training institutions, and developing effective quality assurance systems. Priority Area: Focus on the quality of initial education and early career support for new teachers and on raising the quality of

[54] The eight key competencies for lifelong learning, can be consulted at: http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11090_en.htm [October 3, 2015]

	continuing professional development opportunities for teachers, trainers and other educational staff.
Promoting equity, social cohesion and active citizenship.	- Education and training should enable all citizens to acquire and develop skills and competencies needed for their employability and foster further learning. Priority Area: Promote generalized equitable access and reinforce the quality of provision and teacher support for Pre-primary education.
Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training.	- Acquisition of transversal competencies (digital competence, learning to learn, a sense of initiative and entrepreneurship, and cultural awareness). - Ensuring a fully functioning education-research-innovation knowledge triangle. Priority Area: Promote creativity and innovation by developing specific teaching and learning methods (including the use of new ICT tools and teacher training).

Source: researcher's original compilation from Council of the European Union (2009)

The EU was emphasizing the need to open out education systems to more accessible and flexible structures, to improve qualifications frameworks and to promote teacher and student-teacher exchanges, while enhancing competencies and innovation.

One year later, *Europe 2020 A Strategy for Smart, Sustainable and Inclusive Growth* (European Commission, 2010) tried to give European policies a new direction to address the EU financial crisis. It aimed "to turn the EU into a smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion" (p. 5).

In order to reach this objective, the Commission presented seven flagship initiatives. In this case, the initiative "Youth on the move" was the platform responsible for enhancing the performance of education systems. Conversely to other initiatives in the EU, references to teachers were scarce.

However, other initiatives such as the European Commission (2012c) study *Supporting the Teaching Professions for Better Learning Outcomes,*[55] deepened into teacher education. This document reported contemporary difficulties and trends, as well as basic strategies to improve teacher education. The core found difficulties discussing the gap between the skills and competencies teachers have, and those needed to teach in today's societies (mostly ICT skills, competencies to deal with student diversity and special needs children or to address conflict or violence).

The trends showed that Member States are generally following European suggestions, and therefore requiring a qualification at Master's level, except for early childhood education and care, where most countries opt for Bachelor's level. The suggestions to improve teacher education are as follows:

- Set a clear framework of teacher competencies.
- Set clear standards that define what teachers are expected to know and able to do upon graduation from their initial teacher education.
- Initial teacher education should provide more than pedagogical competencies, subject matter knowledge and subject didactics.
- Initial teacher education should develop students' capacities for reflective practice and on-the-job research.
- Initial teacher education should prepare teachers to diagnose student problems and to select from a wide repertoire of possible solutions.

As affirmed in the theoretical framework, in this period a new stage gained relevance, the practicum. This document reflects the increasing concern, across Europe, about the structures and contents of the practical work. The EU detected a trend to remodel teachers' initial education towards longer practicum periods, which start earlier in the programmes and receive stronger support. It also gave some guidelines for planning and implementing this as a successful component:

[55]This document accompanied the *Communication from the Commission Rethinking Education: Investing in Skills for Better Socio-economic Outcomes* (European Commission, 2012c). The report, in turn, determined Members' priority to review the effectiveness of the academic and pedagogical quality of initial teacher education.

- The practicum should be well-organized through effective partnerships between teacher education institutions and host schools. Both institutions must agree on sharing responsibilities, roles and resources.

- The practicum should be planned including appropriate use of observation, feedback, reflection and collaboration with other colleagues/student teaching staff.

- Mentors should be adequately selected, educated, supported and remunerated; mentorship support ought to match the individual learning needs of all student teachers.

- There should be both formative and summative assessment of student teaching.

Practices are nowadays considered one of the core stages in initial teacher education. In 2013, the European Commission (2013b) published a survey (TALIS) stating that initial teacher education was more effective when planned with a balanced mix of content, pedagogy and practical components. It also notes that students in programmes with pedagogy and practical components for all of the subjects they teach feel better prepared than students without this kind of practice. The study also points out the positive effects of clearly defined teachers' competencies, quality assurance mechanisms and closer cooperation between initial teacher education institutions, schools and educational authorities.

When summarizing the latest documents (European Commission, 2012a, 2012b, 2012c, 2013b; European Commission/EACEA/Eurydice, 2013; Council of the European Union, 2014), current trends often include allusions to programme flexibility, career attractiveness, practicum design, teachers' competencies, system coherence or longer degrees, among others. Knowledge of these European trends and recommendations would help to understand Spanish educative policies and recent reforms, regarding, among other matters, teachers' initial education.

4.2.5. EDUCATION IN SPAIN

4.2.5.1. GENERAL EDUCATION LEGISLATION AND GUIDELINES

In Spain, the Congress of Deputies is the body responsible for voting on and approving or rejecting national laws. However, the initiative for a new law can come from the Congress, the Senate, an autonomous community or 500,000 citizens. The Spanish Ministry of Education, Culture and Sport (MECS) designs the national education law, which establishes basic standards, principles, objectives, part of the contents and subjects, as well as the organization of the different school levels, for the whole country. Nonetheless, education

matters belong to the category of transfer competencies. This decentralized management model distributes responsibilities between the State, autonomous communities, local authorities and schools. After the endorsement of the Congress, each of the administrative levels makes the national proposal concrete.

This section aims to frame the overall education context through core legislation regarding general education, higher education and teachers' legislation. In Spain, educative legislation has traditionally been a subject of political confrontation, as demonstrated by the fact that seven general laws on education have been approved since the beginning of democracy (one was never implemented). In this section only current laws are described.

● General and secondary education

- Spanish Constitution (Ministry of the Presidency, 1978)

At the present time there are two legislative references affecting general education: this overlap is because of the approval of a new act in 2013, which is still being implemented. These two fundamental laws are:

- Organic Law[56] 2/2006, of 3 May, on Education (LOE in its original acronym) (MECS, 2006a).
- Organic Law 8/2013, of 9 December, for Improving Education Quality (original acronym LOMCE) (MECS, 2013a).

● Higher education

- Organic Law 4/2007, of 12 April, on Universities (MECS, 2007a).
- Royal Decree 1393/2007, of 29 October, which establishes the organization of official university courses (MECS, 2007b).
- Royal Decree 1027/2011, of 15 July, on the Spanish Qualifications Framework for Higher Education (MECS, 2007b).

● General laws and orders on teacher education

[56] In Spain some general and national laws are called Organic, which according to the Spanish Language Academy (RAE), are laws derived from the Constitution of the State, which would assure their execution and proper realization. In some other countries, this group of acts would be equivalent to fundamental legislation.

- Organic Law 2/2006, of 3 May, on Education.

General and secondary education

- Spanish Constitution (1978)

The Spanish Constitution was approved by the Congress of Deputies and the Senate on 31 October 1978, ratified through a referendum on 6 December, and later signed by King Juan Carlos I on 27 December. The whole of Article 27, divided into 10 sections, tackles education as a basic right of the population. This article recognizes everyone's right to education as well as freedom of teaching (27.1), and establishes elementary education as compulsory and free (27.4); it determines the objective of education to be the full development of the human personality, and even when not linked to a specific political orientation, it highlights that this development shall occur while respecting the democratic principles of coexistence and basic rights and freedoms (27.2).

To guarantee these rights, public authorities have the duty to set up educational centres and to design a general education programme in which all concerned sectors intervene (27.5). In public institutions, teachers, parents and pupils, when appropriate, shall participate in the management and control of schools (27.7). However, public administration is not the only body with the right to set up educational centres: individual and legal entities share this right, when respecting Constitutional principles (27.6). The same article recognizes the autonomy of universities under the terms determined by law (27.10).

In order to ensure compliance with the laws, all centres are to pass an inspection and official recognition (27.8). When institutions meet the requirements established by law, they shall be helped by the public authorities (27.9).

Although the Constitution determines that no religion should be linked to the State, religious education is not kept completely out of schools. According to this article, the public authorities shall guarantee the right of parents to offer their children religious and moral instruction along the lines of their own convictions (27.3).

Other articles addressing education are Articles 43 and 51. Article 43 gives public authorities responsibility for fostering health education, physical education and sports, as well as encouraging the proper use of leisure time. Article 51 refers to the promotion of information and education about consumer and user protection.

- Organic Law 2/2006, of 3 May, on Education (LOE)

The complete educative system, and therefore junior and senior secondary education, is framed in this national act. It was published in May 2006, and was approved in the Congress by a large majority of the parties.

In accordance with the Constitution, this act reiterates the full development of students' capacities and personality. Some values are echoed throughout the law, such as respect for fundamental rights and personal freedom, responsibility, democracy, solidarity, tolerance, gender equality, no discrimination and justice, among others. It conceives of education as a lifelong learning process, in which teachers are an essential factor, and encourages society to value and support their profession (Chapter 1 of Preliminary Title, principles and aims of education). It also develops the rights and responsibilities of teachers, types of institution (public, private and co-funded/private), centre management, centre autonomy, funds, bodies responsible for the centres, and education system evaluation and inspection.

Preliminary Title, Chapter 2, organization of the education system and lifelong learning, determines the division of the education system into 10 levels: early childhood education, primary education, compulsory secondary education (junior), senior secondary education, vocational training, languages, arts, sports, adult education and tertiary education (university). Of this classification, primary education and junior secondary education constitute what is considered as basic education. Secondary education is, by law, divided into compulsory (junior) and post-compulsory (senior).

The order, as stated in the Constitution, has an explicit article to confirm that basic education, which includes junior secondary education, is compulsory and free. It determines basic education to last 10 years, usually from 6 to 16 years old, allowing students to attend ordinary institutions until age 18.

General lines to develop a national curriculum are given in Chapter 3 of the Preliminary Title. The State has responsibility for designing the general framework, including objectives, basic competencies, contents and evaluation criteria. The State determines 55% of the core contents of the basic curriculum for autonomous communities with a co-official language (Catalan in Catalonia, Community of Valencia and Balearic Islands; Basque in Basque Country and Navarre; and Galician in Galicia), and 65% for those where Spanish is the only official language.

After the general framework addressing the main composition, inter-administrative levels collaboration, lifelong learning strategies, resources, etc., the act has a chapter for each of the levels in Title I. Chapter 3 regards junior secondary education and Chapter 4, senior

secondary education. Junior secondary education lasts 4 years, from age 12 to 16, and the main goal is to teach students basic cultural elements, mainly humanistic, artistic, scientific and technological; to teach them study and work habits; as well as to prepare them to enter post-secondary studies or the working world.

According to this act, from 1st to 3th grade, all students should take natural sciences (in 3rd grade this can be divided into biology and geology and physics and chemistry), physical education, social science, geography and history, Spanish language and literature (and the co-official language in the communities where there is one), foreign language and mathematics. During these three years, besides these classes, students take arts, music and technology. Out of the first three years, another compulsory class is civics and human rights, mainly focusing on gender equality.

In the 4th grade, the compulsory classes are physical education, civics and ethics, social science, geography and history, Spanish language and literature (and co-official), mathematics and first foreign language. Another three classes are taken out of biology and geology, arts, physics and chemistry, ICT, Latin, music, second foreign language and technology.

Pedagogic proposals are the responsibility of each of the schools, taking into account their students' diversity and learning rhythms, facilitating access to education for all students and promoting autonomous learning as well as team work. Students can accede to the next grade with up to two failed subjects. With three failed subjects, students repeat the same grade; however, grades can only be repeated once with a maximum of two repetitions per academic level (except the 4th grade which can be repeated twice).

At the end of the second year, a diagnostic test evaluates basic competencies for all students. Nonetheless, the evaluation does not affect students' future, since this assessment is established to inform educative centres and families about students' education level. At the end of the stage, students receive a diploma in junior secondary education, while students who have not passed the 4th grade obtain certification with the student's last grade.

After obtained a junior secondary education diploma, students can get into senior secondary education. The abovementioned Title I, Chapter 4 states this stage as a requisite to enter higher education. Senior secondary education is conceived as a 2-year level, distributed in three modalities, (1) arts, (2) sciences and technology, and (3) humanities and social sciences.

Classes are organized into three types: common subjects, a specific subject for each modality and selective subjects. These subjects are determined by the State in agreement with autonomous communities. Common subjects are contemporary world science, physical education, philosophy and civics, history of philosophy, Spanish history, Spanish language and literature (and co-official), and foreign language. At this level, besides autonomous learning and team work, research methods are stressed.

Assessments are continuous and differentiated by subject. Students can advance to the 2nd year with a maximum of two failed subjects. However, failed subjects should be re-taken and the senior secondary diploma will not be granted until all subjects have been passed. This diploma allows students to take the university entrance national examination.

- Organic Law 8/2013, of 9 December, for Improving Education Quality (LOMCE)

The last national and general education act was approved in December 2013. However, it will not be completely implemented until academic year 2017/2018. Controversially, this law was only approved by the party in power, the Popular Party, which had at that time an absolute majority. The rest of the political groups voted against it, and two abstained.

This is not a completely new law, but a modification of the preceding act, completed by seven new dispositions. It establishes a new level inside basic education, alongside primary and junior secondary education, named the basic vocational cycle. Civics has disappeared as a subject and become part of transversal knowledge, and religion has become an evaluable subject. Entrepreneurship is included as transversal content and new assessments in primary (3rd and 6th grade), junior (4th grade) and secondary education (2nd grade) are implemented, while the national entrance examination has been cancelled.

The organization of the junior secondary stage has changed from a 4-year level, divided into two cycles, to a 3+1 system, in which the last academic year already offer two modalities; one for those who aim to enter senior secondary education and one for those who aim to enter a vocational training programme. Subjects are categorized into three kinds: core, specific and specific for autonomous communities.

The curricular programme has also suffered several modifications. Music has been eliminated from Grades 1 to 3 of junior secondary education, and has become one of the seven optative classes for those grades; entrepreneurship has become a new optative; religion is both and optative and a specific subject, and two modalities of mathematics are offered from third grade, initiation into academic mathematics learning or initiation into applied

mathematics; also in Grade 3, students choose modality subjects between design and technology or ICT.

An assessment should be sat at the end of the 4th year for both the academic and vocational options. Students can only obtain a junior secondary education diploma by passing this examination.

The next step, senior secondary education, is divided into three categories, of which two are in turn separated into two modalities: arts, sciences (sciences and engineering or health sciences) and humanities and social sciences (humanities or social sciences). The classes in senior secondary education are organized into core, specific (designed by modality) and electives. Students with a positive evaluation in all subjects must take another assessment at the end of the last year. This evaluation has a double objective, to obtain a senior secondary education diploma and to accede to higher education. For universities with an extra evaluation process, the mark for this assessment should represent at least 60% of the final grade, while for universities without an extra selection system, it is the only prerequisite.

The actual curriculum described by this law is further detailed in Section 4.2.5.4.

Higher education

- Organic Law 4/2007, of 12 April, on Universities

This act amended Organic Law 6/2001 on Universities, which was also modified by two Royal Decrees, in 2005 and 2012, by the Act 14/2011, of 1 June, on Science, Technology and Innovation in 2011 (MECS, 2011a), and by the last Organic Law for Improving Education Quality in 2013. According to the final version, universities are responsible for offering the public service of higher education through research, teaching and study, the aims of which are the creation, development, transmission and evaluation of science, technology and culture; to train professionals in activities which demand specific artistic and scientific knowledge; to improve economics and the quality of life; as well as lifelong learning (Article 1). This law establishes students' rights and duties, access terms and student supports and grants (Title VIII), and determines research as a duty and a right for universities (Article 40).

To carry out these responsibilities, higher education institutions can hire seven types of research staff: assistant, assistant lecturer with doctorate, collaborating lecturer, contracted lecturer with doctorate, associate lecturer and visiting lecturer (Article 48); and four levels of teacher: University Professors, University Full Lecturers, University School Professors and University School Full Lecturers (Article 56). The different levels of teachers and research

staff can work in all higher education institutions. Public Universities are made up of Faculties, Technical Schools or Higher Polytechnic Schools, University Schools or Polytechnic University Schools, Departments, University Research Centres and institutions that organize distance learning (Article 7).

University structures should be divided into at least three cycles, which will lead to the qualifications of university diploma, technical architect, technical engineer, Bachelor's, architect, engineer and doctor (Articles 37 and 38). Universities must ensure the full integration of the Spanish system in the European Area of Higher Education; and must promote student and teacher mobility within the European Area of Higher Education (Articles 87 to 89).

Article 2 refers to Universities' high level of autonomy. They can autonomously develop their own statutes; manage their representative body; approve and develop research and specific lifelong learning syllabuses; design their admission policies, permanence rules and student verification knowledge system; and the selection, training and promotion of teaching, research and administration and staff services. Despite this high autonomy, university policies must be reconciled with national quality assurance standards. The responsibility for evaluating certified and accredited universities and programmes belongs to the National Agency of Quality Assessment and Accreditation (Articles 31 and 32).

- Royal Decree 1393/2007, of 29 October, which establishes the organization of official university courses

This Royal Decree develops the official university courses according to the European Higher Education Area guidelines, in harmony with Spanish legislation. The regulation applies to official studies of Bachelor's, Master's and Doctoral programmes taught in Spanish universities. Universities autonomy is broadening and they can themselves create their own degrees without a previous national or governmental proposal. Values promoted by this law and which may be included in higher education institutions' new and old programmes are fundamental rights, equality between men and women, human rights, equality of opportunities, no discrimination, democratic values and peace, among others.

Studies are to be planned in the European Credit Transfer and Accumulation System, and both Bachelor's and Master's programmes are measured by numeric qualifications. Besides these general specifications, the Royal Decree details the particularities for designing, approving and recognizing programmes at each of the three levels.

On one hand, Bachelor's degree studies aim to lead students to the acquisition of general education in one or more disciplines and to prepare them for professional activities. They will give to a university diploma and the possibility to get a European mention (Article 9). Bachelor's degrees will prioritize basic and general teachings, while Master's will be orientated to a concrete specialization. Bachelor's degree plans shall comprise between 180 and 240 credits, including both theoretical and practical learning, and be assigned to a specific knowledge area. There are five knowledge areas: arts and humanities, sciences, health sciences, social and juridical sciences, and engineering and architecture. At the end of the studies, undergraduates should elaborate and present a final dissertation which may be worth a minimum of 6 credits and a maximum of 12.5% of the total programme (Article 12).

On the other hand, the purpose of the Master's degree is to offer advanced and specialized or multidisciplinary professional or academic education, as well as to promote research attitudes (Article 10). Plans are designed by universities, and encompass between 60 and 120 credits, including practical and theoretical learning. Between 6 and 30 credits are dedicated to a final dissertation (Article 15). The last level, PhD, will mainly focus on the acquisition of quality research competencies and abilities (Article 11).

- Royal Decree 1027/2011, of 15 July, on the Spanish Qualifications Framework for Higher Education

This Royal Decree describes higher education levels to ease the classification, comparability and transparency of the Spanish educative system. The aims of each of the levels correspond to those established in the above-explained Royal Decree 1393/2007. This order categorizes qualifications according to both the Spanish and the European classification. It also defines four main concepts: qualification, obtaining a diploma or degree; learning outcomes, the expected knowledge and abilities; level, determined according to generic descriptors expressed in terms of learning outcomes and qualifications; and descriptors, the group of knowledge outcomes related to a specific framework of qualifications.

The Spanish structure is divided into four levels. Table 4.14 sums up the Spanish levels and their correspondence with the European framework of qualifications.

Table 4.14: Spanish-European higher education levels

Spanish Level	European Level	Aims/learning outcomes	Qualification
Level 1. Vocational training higher level.	Level 5	Capacitation and specialized knowledge for a profession.	Advance technician in: professional training, arts and design or sports.
Level 2. Degree.	Level 6	Acquisition of general education in one or more disciplines and preparation for professional activities.	Degree qualification/University Diploma. Higher qualification in advanced Art teaching.
Level 3. Master's.	Level 7	Advanced and specialized knowledge. Multidisciplinary professional or academic education. Promotion of research attitudes.	University Master's qualification. Master of Arts qualification.
Level 4. PhD.	Level 8	Acquisition of research competencies.	PhD qualification/Doctorate.

Source: Researcher's original work based on MECS (2011b)

Teachers' general laws and orders

- Organic Law 2/2006, of 3 May, on Education (LOE)

The Organic Law for Improving Education Quality (2013) does not address the matter of teachers, therefore the main reference is still the preceding act. This Organic Law of Education, in Title III, details teachers' duties, competencies for teachers at different levels, teacher education and recognition, support and appraisal of teachers. Its preamble already establishes some basic ideas, such as the need to improve the initial teacher education model aiming to harmonize it with Europe, to offer teachers an adequate scientific preparation, skills to teach in a knowledge-based society and technology, as well as pedagogic and didactic knowledge. It also strongly suggests strengthening links with the labour market, developing entrepreneurship competencies, improving foreign language competence and increasing mobility and European cooperation, among others.

This act encourages the Education Administration to ensure teachers' consideration and respect, to increase teachers' status and recognition of the teacher's role in society, to give priority to improving teachers' working conditions, and gives teachers free access to public libraries and museums (Article 104). Alongside these rights, teachers must perform numerous responsibilities. The main principles on which teachers' work is based are collaboration and teamwork.

Some of the duties, cited in Article 91, are programming, planning, teaching and assessing their specific subjects and levels; collaborating with families and specialized services and offering educational, academic and professional advice, guidance and support; helping to fully develop their students in the intellectual, affective, psychomotor, social and moral spheres; promoting, organizing and participating in complementary activities, in which teachers encourage a climate of respect and social values such as tolerance, participation, freedom and democracy; and periodically informing families about their children's progress, among others.

Regarding teacher education, the law states that initial education contents must cover the necessary capacities to face the challenges of working in the education system. The minimum requisites for teaching in the different stages and subjects areas are holding the corresponding academic qualification, and having completed the pedagogical and didactic education stipulated by the government for each subject (Article 100).

4.2.5.2. EDUCATION AND FUTURE GUIDELINES

Consequences of Education and Training 2020 in Spanish education

ET 2020, the European strategic framework for cooperation in education and training, determines certain benchmarks in the field of education to be reached by 2020. Member States acquired the compromise to establish national objectives according to the initial situation and circumstances of each nation. In general, the four strategic objectives and its indicators, selected by the Commission are:

1. Making lifelong learning and mobility a reality.
    a. At least 15% of adults between 25 and 64 years old should participate in lifelong learning.
    b. At least 20% of graduates in Tertiary education and 6% of young people, aged 18 to 34, with vocational training should spend a study period abroad.

2. Improving the quality and efficiency of education and training.
    a. Reduce to at least 15% the 15-year-old students with low achievements in the basic competencies of reading, mathematics and sciences.
    b. Foreign language skills:
        i. At least 50% of 15-year-old students should reach proficiency level B1 (Common European Framework of Reference for Languages) or higher in a first foreign language.
        ii. At least 75% of junior secondary education students should register in a second foreign language.
    c. The employment rate of students between 20 and 34 years old with senior secondary education, post-secondary non-tertiary and tertiary education (ISCED 3-6) graduated 1 to 3 years before the reference year, should reach at least 82%.
3. Promoting equity, social cohesion and active citizenship.
    a. At least 95% of children between 4 and the starting age of compulsory education should participate in early childhood education.
    b. Less than 10% of students should be early leavers from education and training.
4. Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training.
    a. Percentage of people between 30 and 34 attaining Tertiary education must be at least 40%.

The Spanish national goals fully coincide with the European general targets in all benchmarks but two. On one hand, while the European target for the highest percentage of early leavers from education and training is 10% by 2020, Spain's expectations are slightly lower, at 15%. On the other hand, the objective for tertiary education attainment is slightly higher in Spain, targeting 44% of the population instead of 40% (European Commission, 2014).

To reach these goals, the Conference of Education (MECS, 2013b) has made several proposals, mainly related to collaboration among different administrations, on the design of

comprehensive action plans tackling early leaver percentages and widening the offer of lifelong learning. As a consequence, three plans are being elaborated among the administrations of all the autonomous communities. One of them addresses prevention, intervention and compensation measures to lower dropout rates. Another targets the increment of graduates in senior secondary education and vocational training (middle grade). Guidelines for this plan include raising senior secondary students' success expectations, or efficiency assessments on vocational training programmes with low rates of graduates. The third plan is linked to administrations compromising on elaborating annual or biannual strategies to improve lifelong learning.

All of the plans contemplate measures to prevent and mediate in early leaving of education, to increase social awareness about the significance and value of education, to develop education system flexibility and accessibility and to improve national, autonomic and local administration cooperation to offer a better transition between education, training and employment. Secondary education, the level with the highest amount of student dropouts, is one of the core pieces to reach these objectives, as are teachers at this level.

4.2.5.3. SYSTEM OVERVIEW

The current structure of the Spanish education system was designed on the basis established by Organic Law 2/2006, of 3 May, on Education, and the new Organic Law 8/2013, of 9 December, for Improving Education Quality. As a result of both legislations, the actual system is organized in two cycles of three years for early childhood education; a 6-year stage for primary school; four years for junior secondary education, divided into two cycles of three and one years; a 2-year stage for senior secondary education; and higher or tertiary education, which usually last between two years, for vocational training and Master's, 3 to 4 years for PhDs, and 4 to 5 years for undergraduate degrees. Primary education and junior secondary education are considered as compulsory levels.

The non-compulsory levels 0-6 reach high levels of attendance, especially 3-6 early childhood education. According to the OECD indicators (2012) while the OECD average rate for 3-year-olds' enrolment is 66%, Spain has the second-highest enrolment rate with 99%. It is also one of the only seven countries which have more than 90% of 3-year-olds enrolled in pre-primary education.

This stage is divided into two cycles, 0-3 and 3-6. The second cycle of early childhood education curricula is organized in Royal Decree 1630/2006, of 29 December (MECS,

2006b). The curriculum is divided into three areas: self-knowledge and autonomy, environmental knowledge and language, and communication and representation. In the second cycle, especially in the last year, administrations are responsible for promoting second language knowledge; they are also responsible for offering children their first contact with reading and writing, as well as early initiation in basic number skills, information and communications technologies, and visual and musical expression.

According to Royal Decree 132/2010 (MECS, 2010a), the maximum student-teacher ratio is 25 students per teacher, and minimum qualification to teach at this level is an undergraduate diploma with concentration in early childhood education.

Primary and junior secondary education are both compulsory and free stages, and therefore, have near-universal enrolment rates. The compulsory and free stages cover from 6 to 16 years old. Royal Decree 132/2010 (MECS, 2010a) states, as for early childhood education, a maximum student-teacher of 25 students for primary school, and 30 students for junior secondary education. The actual student-teacher ratio estimated by the Ministry of Education, Culture and Sport (2014a), was set, for the academic year 2014/2015, at 13.4 for primary school and 10.6 for junior secondary classes.

To work in primary schools, teachers must have at least an undergraduate degree with a concentration on primary education. Curricula and basic knowledge for primary education are established by Royal Decree 126/2014 of 28 February (MECS, 2014b). During these six years, children have as their main goal to develop the seven key competencies alongside the core, specific and specific for autonomous communities' subjects. The core subjects are nature science, social science, Spanish language and literature (and, in some places, the official language of their autonomous community), mathematics and first foreign language. Specific subjects are arts, physical education, and social values and civics. Teachers teach all subjects except music, foreign language and physical education, which are taught by specialist teachers in these subjects.

Children take two final assessments during this stage, but since the stage is compulsory, none of them have academic consequences. The first test is handled at the end of the 3rd year, when children are 8 years old, and the second at the end of the 6th year, when students are 12 years old. The main objective in the 3rd grade is to detect learning difficulties in mathematics and language. In the 6th grade, competencies in linguistic, mathematics, sciences and technology are tested.

The next stage, junior secondary education, lasts four years and the main goal is to teach the basic elements of culture in the humanistic, artistic, scientific and technological areas. It also focuses on developing studying and working habits and preparing for the next period (employment or studies). The curriculum is explained in depth in Section 4.1.5.4.

According to the national organic laws, above-explained, and Royal Decree 1393/2007, a graduate, engineer or architect degree and the specific Master should be accredited to teach a determined subject or subjects in both junior and senior secondary education. Teaching degrees are also regulated by Order ECI/3858/2007, of 27 December (MECS, 2007c), which is further explained in Section 5.2.

At the end of this level, a junior secondary education final evaluation must be taken. Students choose to take the exam according to the academic or the applied (vocational) learning path. The pass mark is 5 out of 10 points, and subjects for all students are: all core subjects except biology and geology and physics and chemistry, which can be chosen as optative subjects; two subjects from the 4th grade core subjects; one subject for the specific subjects except physical education, religion or ethics.

The final evaluation should be passed in order to obtain a Junior Secondary Education Diploma. However, there is an important difference between the two paths: the vocational path does not give the possibility of continuing to regular senior secondary education, but only to vocational training. However, due to the newness of the legislation, there are no official measures and average marks for this new system.

After 16, students enter the senior secondary level. The OECD (2012) detects that, in this post-compulsory level, Spain has one of the lowest attainment rates for secondary education among 25-34 year-olds (65%, compared to the OECD average of 82%; Spain ranks 31st out of 36 OECD and non-OECD countries). However, this rate shows a significant improvement when compared with earlier generations. Most of the students reach higher levels than their parents. When examining young people on the standard ages, referring to the regular path for participating in senior secondary education, school attendance rate is 96.7% for 16 years old and 91.1% for 17 years old (MECS, 2014c).

Royal Decree 132/2010 (MECS, 2010a) states a maximum ratio of 35 students per teacher in senior secondary education, while the Ministry of Education, Culture and Sport (2014a) has determined a real ratio of 1 teacher per 9.9 students in 2014.

The senior secondary education structure and basic knowledge is regulated by Royal Decree 1467/2007 of 2 November (MECS, 2007d). The main objectives are to train students in the necessary skills and knowledge to enter working society in a responsible and competent way and to prepare them to access higher education.

In addition, according to LOMCE, at the end of this stage, students should pass a final examination to obtain a Senior Secondary Education Diploma. After obtaining this diploma, students are allowed to apply for any university. Each university can design its own selective process.

The subjects that are examined in the senior secondary education test are related to students' choices and paths during the two academic years. The examination includes all core subjects, two subjects from the optional-core subjects and one specific subject, except physical education or religion. The pass mark is, as in the junior final examination, 5 points out of 10.

With the Organic Law of Education (2006), students did not have to take a final examination to obtain the Senior Secondary Education Diploma, but they were required to pass all the classes. However, students needed to pass a national exam called the University Entrance Examination (*Prueba de Acceso a la Universidad*) to enter a higher institution. The selection process was based on the average score between the student's grade in senior secondary education and the University Entrance Examination. This exam will disappear with the Organic Law for Improving Education Quality, yet until 2017-2018 students will be using the old selection system.

The Spanish university system is adapted to the already explained European Higher Education Area, therefore degrees last four years and study time is measured in ECTS. In Spain, one academic year corresponds to 60 ECTS, and one credit is equivalent to 25 hours. Credits are assigned to all academic work: lectures, laboratory work, seminars, private study and theses. The student workload is planned to be 1,500 hours per academic year.

After obtaining a 4-year degree, students can enter a post-graduate degree. Master's degrees can last one or two years and are the main requirement to enter a PhD programme, which last between three and four years.

The Spanish educational system offers three types of institution: public schools, co-funded/private schools (also referred as charter schools or state-funded private schools), and private schools. All levels, from early childhood education to university degree, can be taken

in public and private institutions. The differences mainly reside in the price of the studies, the ideology and the origins of the funding.

Public schools are secular institutions, funded and managed by central government or autonomous communities with the help of local authorities. Most of these centres offer all of the basic and compulsory educational stages; there are also public early childhood education schools, senior secondary education institutions and universities. From the second cycle in early childhood education to senior secondary education, these schools are free of charge. Parents have to pay for books, insurance and other school materials. Public universities charge enrolment fees, according to public prices established by each autonomous community.

Charter schools (co-funded/private) are private centres heavily subsidized by central government. They have freedom of management adapted to certain conditions set by the government such as limited class size, admissions policies, etc. In these schools, students in the compulsory levels do not pay education fees. Although public schools are not allowed to demand any kind of contribution, these institutions usually ask parents to pay for other activities or to subsidize the school or the organization with 'donations'. Non-compulsory education is not free; therefore, parents pay a monthly quota.

Private schools are fully privately funded institutions, financed exclusively by the parents of students and the company or congregation (most of them are owned and managed by religious groups). They have complete freedom of management and a certain freedom of curriculum, within limits set by the government. The limited admission and access depends on the conditions and criteria established by the school itself.

Table 4.15: Spanish education system overview (non-vocational)

<table>
<tr><th colspan="2">Institution</th><th colspan="2">Organization</th><th colspan="3">Main characteristics</th><th>Ages</th></tr>
<tr><td colspan="2" rowspan="3">University</td><td>PhD</td><td></td><td colspan="3" rowspan="3">Adapted to EHEA[57]</td><td rowspan="3">+18</td></tr>
<tr><td>Master's</td><td>1-2 years</td></tr>
<tr><td>Degree</td><td>4 years</td></tr>
<tr><td colspan="8">Senior Secondary Education Diploma</td></tr>
<tr><td colspan="8">Evaluation</td></tr>
<tr><td colspan="2" rowspan="2">Senior Secondary Education</td><td rowspan="2">1 cycle</td><td>2nd</td><td rowspan="2">Option 1: Sciences</td><td rowspan="2">Option 2: Humanities and Social Sciences</td><td rowspan="2">Option 3: Arts</td><td rowspan="2">16-18</td></tr>
<tr><td>1st</td></tr>
<tr><td colspan="8">Junior Secondary Education Diploma</td></tr>
<tr><td colspan="8">Evaluation</td></tr>
<tr><td rowspan="11">Basic Education. Compulsory and free</td><td rowspan="4">Junior Secondary Education /High school</td><td rowspan="2">2nd cycle</td><td rowspan="2">4th</td><td colspan="3">Option 1: Academic education</td><td rowspan="4">12-16</td></tr>
<tr><td colspan="3">Option 2: Preparation for vocational training (taking the final assessment in this path does not give the possibility to continue to Senior Secondary Education, only vocational training)</td></tr>
<tr><td rowspan="3">1st cycle</td><td>3rd</td><td colspan="3" rowspan="3">No different paths. Some electives classes. Core + specific subjects</td></tr>
<tr><td>2nd</td></tr>
<tr><td>1st</td></tr>
<tr><td colspan="8">Evaluation</td></tr>
<tr><td rowspan="6">Primary Education /school</td><td></td><td>6th</td><td colspan="3" rowspan="6">No different paths. Few elective classes (religion/ethics). Compulsory: language and literature, mathematics, social sciences, natural sciences, 1st foreign language.</td><td>11-12</td></tr>
<tr><td></td><td>5th</td><td>10-11</td></tr>
<tr><td></td><td>4th</td><td>9-10</td></tr>
<tr><td>Eval.</td><td>3rd</td><td>8-9</td></tr>
<tr><td></td><td>2nd</td><td>7-8</td></tr>
<tr><td></td><td>1st</td><td>6-7</td></tr>
<tr><td colspan="2" rowspan="3">Infant Education/ pre-school</td><td rowspan="3">2nd cycle</td><td>3rd</td><td colspan="3" rowspan="3">No different paths. Three areas: self-knowledge and autonomy, environmental knowledge and language, communication and representation.</td><td rowspan="3">3-6</td></tr>
<tr><td>2nd</td></tr>
<tr><td>1st</td></tr>
<tr><td rowspan="3">1st cycle</td><td>3rd</td><td colspan="3" rowspan="3"></td><td rowspan="3">0-3</td></tr>
<tr><td>2nd</td></tr>
<tr><td>1st</td></tr>
</table>

Source: Researcher's original work based on national acts (Section 4.2.5.1) and MECS[58]

[57] European Higher Education Area

[58] The new law information webpage was retrieved from http://lomce.mecd.es/itinerarios [March 20, 2015]

4.2.5.4. SECONDARY EDUCATION CURRICULUM DESIGN AND SCHEDULES

Curriculum

In Spain, the academic curriculum is decided by the competent authorities of each autonomous community, who adapt the national education legislation. Royal Decree 1105/2014 of 26 December (MECS, 2015a) establishes the basic curriculum for both junior and senior secondary education.

Both levels must cover core transversal knowledge, taught in all subjects, which includes reading comprehension, oral and writing expression, audiovisual communication, ICT, entrepreneurship, civics and Constitutional education. Teaching programmes should also include prevention of any kind of violence (by gender, violence towards people with disabilities, terrorist violence, racism). Sexist and discriminative behaviours as well as the use of stereotypes should be avoided. Other general knowledge treats sustainable development and environmental education, sexual abuse prevention, road safety education, etc.

The bases of the curriculum development are seven competencies: linguistic communication, mathematical competence and basic competence in science and technology, digital competence, learning to learn, social and civic competence, entrepreneurship spirit and initiative, and cultural expression.

- Junior secondary education

The curriculum and evaluation of this level are designed according to the Organic Law of Education, the Organic Law for Improving Education Quality, Royal Decree 1190/2012 of 3 August referring to the core curriculum (MECS, 2012a), Order ECI/1845/2007 of 19 June on assessments (MECS, 2007e) and the abovementioned Royal Decree 1105/2014 of 26 December (MECS, 2015a).

In junior secondary education, evaluation marks are expressed through numeric qualifications, from 1 to 10, with no decimal points. Each qualification addresses a range of specific terminology: 1 to 4 points, fail; 5, pass; 6, good; 7 or 8, very good; 9 or 10, excellent.

National legislation determines that at least 50% of the academic schedule should address core subjects. Core subjects at this stage include mathematics, language, foreign language, geography and history, biology and geology and physics and chemistry. Specific subjects include religion or ethical values, physical education, technology, music, arts or 2nd foreign language, among others.

The second cycle marks an important step when, at age 15, students choose between two different options: applied education and academic education. While academic education prepares students to accede to senior secondary education, applied education prepares them for vocational training. As explained before, different exams are designed for each of these paths. However, choosing a path in the 4th year does not compel someone to take the final examination in the same path. Table 4.16 outlines the national junior secondary curriculum by year and plan.

Table 4.16: Junior secondary education curriculum in Spain

	1st Cycle (1st year to 3rd year)	**4th year (2 paths)**
Core subjects	Every year: Language and Literature First Foreign Language Geography and History Biology and Geology (1st and 3rd) Physics & Chemistry (2nd and 3rd) Mathematics (1st and 2nd) To choose in 3rd year: Core-optional between Academic mathematics or applied/vocational mathematics (3rd)	**Common** Language and literature Geography and history First foreign language **Academic path** Mathematics orientated to academic education 2 out of: Biology and geology Economy Physics and chemistry Latin **Vocational path** Mathematics orientated to vocational education 2 out of: Sciences applied to professional activity Initiation to entrepreneurship activity and business Technology

Specific subjects	Every year: Physical education Religion or ethics and civics. At least one a year (maximum 4 a year): Classic culture, Art, Music, Second foreign language, Technology, Religion (if not taken before), Ethics and civics (if not taken before)	Physical education Religion or ethics and civics At least one and maximum four out of: Theatre and dance, Scientific culture, Classic culture, Plastic, visual and audiovisual education, Philosophy, Music, Second foreign language, ICT, Religion (if not taken before), Ethics and civics (if not taken before)
Specific subjects	Co-official language and literature.	Co-official language and literature.

Source: Adapted from MECS (2013a)

In Madrid, the curriculum is detailed through decrees and resolutions, in this case through Decree 23/2007, of 10 May (General Administration of Academic Arrangements, 2007a), which establishes the curriculum of junior secondary education in the Autonomous Community of Madrid, the Resolution of 27 June 2007 (General Administration of Academic Arrangements, 2007b), on optative subjects in junior secondary education and the Resolution of 8 October 2009 (General Administration of Secondary Education and Professional Learning, 2009a), which enlarge the available optative subjects for this level.

According to these orders, students in Madrid must take an optative subject per year. The organization of the optative subjects is as follows:

Table 4.17: Junior secondary school optative subjects in Madrid

Grades	Optative Subjects
First and second grade	Compulsory for every school: - Second foreign language - Spanish language re-take class - Mathematics re-take class Optional depending on school organization and resources: - Music workshop (1st year) - Communication and image (2nd year)
Third grade	Compulsory for every school: - Second foreign language - Classic culture - Mathematics re-take class Other subjects: - Mathematics further study: problem solving - Theatre - Other school subjects
Fourth grade	Compulsory for every school: - Classic culture Other subjects: - Biology and geology further study - Physics and chemistry further study - Mathematics further study - Geographical economy - Working life initiation - Entrepreneurship initiation - Universal literature - Second foreign language - Other subjects related to professional initiation

Source: Researcher's original compilation from General Administration of Academic Arrangements (2007b) and General Administration of Secondary Education and Professional Learning (2009a).

- Senior secondary education

This stage of post-compulsory secondary education is regulated by the Organic Law of Education, the Organic Law for Improving Education Quality, Royal Decree 1467/2007 of 2 November (MECS, 2007d), which determines academic structure and minimum learning standards, and Royal Decree 1105/2014 of 26 December, which states the core curriculum (MECS, 2015a).

At this level, evaluation marks are express in numeric qualifications, from zero to ten without decimals. The minimum pass mark is five. Senior secondary education is designed

to last two years; however, the maximum time to finish this stage is four years. Table 4.18 outlines the national senior secondary curriculum by year and modality.

Table 4.18: Senior secondary school curriculum in Spain

1st year			
	Sciences	**Human and Social Sciences**	**Art**
Core subjects	•Language and Literature I • Foreign Language I • Philosophy • Mathematics I Select two out of: •Physics and Chemistry •Biology and Geology •Technical Drawing I	• Language and Literature I • Foreign Language I • Philosophy •Latin I or Mathematics applied to social sciences I Select two out of: • Economy • Greek I •Contemporary World History • World Literature	•Language and Literature I • Foreign Language I • Philosophy • Art Basis Select two out of: • Audiovisual Culture I •Contemporary World History • World Literature
Specific subjects	Compulsory: Physical Education Select 2 or 3 out of: Musical Analysis I, Applied Anatomy, Scientific Culture, Artistic Drawing I, Technical Drawing I, Basic Music Theory and Practice, Religion, Second foreign Language I, Industrial Technology I, Technology, Information and Communication I.		
Autonomous Communities specific subjects: Co-official language and literature			

2nd year			
	Sciences	**Human and Social Sciences**	**Art**
Core subjects	•Spanish History •Language and Literature II • Foreign Language II • Mathematics II Select two out of: • Physics • Chemistry • Biology • Geology •Technical Drawing II	•Spanish History •Language and Literature II • Foreign Language II • Latin II or Mathematics applied to social sciences II Select two out of: • Business economy • Geography • Greek II • Art History •History of Philosophy	•Spanish History •Language and Literature II • Foreign Language II • Art Basis II Select two out of: •Performing arts • Audiovisual Culture II • Design

Specific subjects (2 or 3)	Musical Analysis II, Environmental and Earth Science, Artistic Drawing II, Technical Drawing II, Basic Administration and Management, History of Philosophy, History of Music and Dance, Image and Sound, Psychology, Religion, Second Foreign Language II, Graphic and plastic Expression Techniques, Industrial Technology II, Technology, Information and Communication II.
Autonomous Communities specific subjects: Co-official language and literature	

Source: Adapted from MECS (2013a)

In Madrid, this level is further developed by Decree 67/2008, of 19 June (Madrid Council, 2008) which establishes the senior secondary education curriculum for the Autonomous Community of Madrid, and four resolutions, from July 2008, April 2009, June 2010 (General Administration of Secondary Education and Professional Learning, 2008, 2009b, 2010) and May 2012 (General Administration of Secondary Education and Special Regimen Education, 2012) which detail and increase the number of elective subjects for the Autonomous Community of Madrid.

Still, since the endorsement of the last general law on education, the administrative government of Madrid has not approved new regulations about elective classes or specific curriculum for the region. Therefore, according to valid legislation, in Madrid, the path in Arts is still, in turn, divided into (1) visual arts, image and design and (2) performing arts, music and dance. Each year students should take, beside the core subjects, three path-specific subjects and one elective class. Optative subjects in Madrid are shown in Table 4.19.

Table 4.19: Senior secondary school optative subjects in Madrid

Path	**First year**	**Second year**
Common for all paths	- Second foreign language I - ICT (first or second year) - Foreign language further studies: comprehension and oral expression I	- Second foreign language II - ICT (first or second year) - Foreign language further studies: comprehension and oral expression II
Arts: Performing arts, music and dance	- Music performance	- Psychology. - Scenic technique and interpretation
Arts: Visual arts, image and design	- Mathematics	- Volume II
Science and Technology	- Science experimental techniques	- Geology - Psychology - Fundamental principles of electronics

Humanities and Social Sciences	- History of music	- Basic administration and management - Psychology

Source: General Administration of Secondary Education and Special Regimen Education (2012)

Schedules

LOMCE (2013) states at least 175 school days a year for compulsory education, however the distribution of these 35 weeks during the academic year depends on the autonomous communities' calendars and the level. Classes usually start in the first week of September, and end the last week of June. The school year is divided into three three-month semesters for primary and secondary education and two semesters for higher education. The first semester of secondary education runs from September to Christmas, the second from Christmas to Easter, and the third from Easter to the summer vacation.

According to the current legislation, junior secondary education is distributed over 30 classes a week for the 1st and 2nd year and 32 classes for the 3rd and 4th year; senior secondary education is organized into 32 classes a week the first year and 33 classes a week the last year. School hours are distributed from Monday to Friday, into at least 55-minute periods.

There are two kinds of schedule, split day and short day. A split day usually starts at 9:00 and ends at 15:00 or 17:00. During this schedule, there is a 1 or 2 hour break for lunch, and a half hour break in the morning. In most secondary education institutions, the schedule is organized as a short day. Short days do not have a lunch break, and classes run only in the morning or the afternoon. Usually, short days in the morning start at 8:00 until 15:00, with one or two short breaks. Besides the official school day, some institutions offer morning and afternoon classes in extracurricular activities, mainly sports or music.

The OECD (2014a) estimates the average compulsory instruction time for primary school at 787 hours a year, and 1,061 hours a year for secondary education. A typical day for a junior or senior secondary education student can be distributed as shown in Table 4.20.

Table 4.20: Junior and senior secondary education. Short day schedule

Monday to Friday	
8:30-11:25	3 regular 55-minute classes 5-minute break between classes
11:25 – 11:55	Break
11:55-14:50	3 regular 55-minute classes 5-minute break between classes

Source: Researcher's original work

4.2.5.5. SECONDARY EDUCATION INSTITUTIONS AND TEACHERS

In academic year 2014-2015, according to the Ministry of Education, Culture and Sport (2014a), there were a total of 28,064 institutions which offer regular education, not including higher education institutions or universities. Of this number, 9,010 are state-funded private schools or private schools. The data includes early childhood education schools, primary schools which may also offer early childhood education, 10-year combined schools with primary and junior secondary education which may also offer early childhood education, 4-year and 6-year combined institutions with junior secondary education institutions with/or senior secondary education with/or vocational senior education, 12-year combined schools with primary, junior and senior secondary education, specific centres for special education and distance-learning education. This information does not include arts, music, dance, sports or languages schools and institutions.

It is not possible to divide the data between junior and senior secondary education, since most institutions offer more than one level and type of education. Secondary education can be studied in 8,295 institutions, including 10-year and 12-year combined schools, as well as specific schools for secondary education. The distribution between public and state-funded and private schools is very uneven, since only 24.9% in junior and 64.9% in senior secondary education are public.

There are a total of 379,444 teachers working in these institutions; however, statistics do not specify the data by kind of secondary education level and type of school. Still, there are more teachers working in private than public schools, though this difference is related to the number of institutions. The information shows public institutions having a slightly higher percentage of teachers by institution than state-funded private or fully private schools in senior secondary education, but lower in junior secondary education.

In Madrid, there are 51,020 teachers working in 1,020 secondary institutions. A serious public-private difference is found in Madrid, where only 33.7% of secondary institutions are public. Table 4.21 gives the complete data about national and regional secondary schools:

Table 4.21: Junior and senior secondary institutions and teachers in Spain

	Schools		Teachers	
Total junior secondary education schools in Spain (only 10-year institutions –primary and junior-)	2,142	100%	68,037	100%
Public junior secondary schools	533	24.9%	12,752	18.7%
State-funded private and private junior secondary schools	1,609	75.1%	55,285	81.3%
Total regular senior secondary[59] education (6-year –junior and/or senior - and 12-year combined schools – primary, junior and senior-)	6,153	100%	311,407	100%
Public senior secondary education	3,994	64.9%	207,455	66.6%
State-funded private and private regular senior secondary education	2,159	35.1%	103,952	33.4%
Madrid[60] secondary education (junior and senior)	1,020	100%	51,020	100%
Madrid public schools	344	33.7%	19,869	39%
Madrid state-funded private and private schools	676	66.3%	31,151	61%

Source: Researcher's original compilation from MECS (2015b) and Education, Youth and Sports Council of the Autonomous Community of Madrid (2015)

In Spain, teachers' salaries depend on the General State Budget, which establishes salary rates according to the degree level and accreditation needed. This basic salary is the same for all teachers. Another part of the salary depends on the different regulations planned each year either by national government and/or the autonomous communities. Autonomous communities fix the pay that complements the salary. Government workers usually have 14 payments a year. The two extra wages are habitually received in June and December; they are

[59] Secondary education statistics include centres with vocational secondary education. Data corresponds to the period 2012-2013

[60] School data in Madrid makes reference to the 2014-2015 academic year, while information about teachers was extracted from the Spanish National Institution of Statistics database and refers to academic year 2012-2013.

not always full-salary, but a percentage sometimes established by the autonomous communities. According to Eurydice (2014) secondary teachers' gross annual salary ranges from €31,079 to €43,883 (US$38,537 to US$54,414 a year) including complements (years of experience, additional allowances and extra payments). Net salaries usually range from €1,700 to 1,800 a month (US$2,108 to US$2,232).

Secondary teachers' working hours are established by national regulations, later detailed by each autonomous community. Teachers' working hours are divided between classroom hours and complementary hours. According to Eurydice (2012), classroom teaching hours range from 18 to 21 a week, and the total working time is 38 hours (of which at least 30 hours are in the schools). For instance, in Madrid, administrative instructions for the academic year 2014/2015 determine secondary teachers' working hours at 37.5 hours a week, of which 20 periods of 55 minutes (around 18 hours) are classroom teaching hours. What we called 'invisible hours' in the preceding section do not appear in any of the consulted studies.

Teachers' role and status

The traditional role of Spanish teachers is based on a drastically different starting point to that of China's; since Spain was, for many centuries, embedded in a strong religious setting where the Catholic Church exerted a heavy influence. Teachers' role was therefore intimately linked to Catholic beliefs, which gave teachers the role of knowledge owners and students passive learners. Before the Spanish Civil War, during the Second Republic, secular education was established, religion classes were not compulsory and freedom of choosing religion for both teachers and students was recognized. Teacher education, bilingual education and coeducation, where girls and boys studied together, were stressed.

However, during the Civil War, teachers suffered an ideological purge and, as in China, the profession's status suffered a deep recession. Education began turning to a conservative role when some vacant positions were taken by priests, ex-military soldiers or their relatives who had no specific pedagogical knowledge and strong Catholic and extreme right wing ideologies. According to Morente Valero (2001), the consequences of the purge were terrible for teachers and schools, since religion came back to schools alongside criticisms of democratic principles (freedom, plurality, tolerance), and a rejection of modern pedagogy. The schools returned to traditional methods and contents.

Traditional teachers were considered as the centre of the learning method and the managers of the educational process with authority and irrefutable truths. Teachers were

responsible for delivering and organizing the contents, and evaluation was mainly based on memorization and repetition. In that context, teachers were essentially expected to keep discipline and transmit knowledge.

Nevertheless, due to numerous events, such as the arrival of democracy, the opening to the exterior, globalization, new technologies and Spain joining the European Union, a progressive modification of teachers' role started. Teachers became intermediaries who help research and access to knowledge and education; the relationship with the students changed from top-down to a more equal level; evaluation centred on achievement and performance; the methodology switched from centring on the teacher to focusing on the student and group of students; contents and planning gained flexibility; and teacher education became a cornerstone for the educative system.

Gradually, teachers recovered their social recognition. Nowadays, out of the 21 countries participating in the Teacher Status Index (Varkey Gems Foundation, 2013), the general score positions Spain 12th (30.7 points), near other European countries, right below France and above Finland. Education systems only lie in the middle of the table, while the specific indicator for trust in teachers to deliver good education places Spain 3rd in the study, with 6.9 points, 0.6 points higher than the average, and only below Brazil and Finland and above China and the USA.

In Spain, as in Germany, Italy, Switzerland and the Netherlands, teachers' status is associated with that of social workers. The next associations, with a large gap, are made to doctors and nurses' status. This could be one of the reasons why only around 32% of parents would encourage their children to become teachers. When measuring respect for teachers, only 25% of the population think their pupils respect teachers, while 50% think their pupils disrespect them.

Many researchers have carried out studies on university students regarding good teachers' qualities. Some of the most recent include Martínez, García and Quintanal (2006), Gargallo, Sánchez, Ros, and Ferreras (2010), Casero (2010) and San Martín, Santamaría, Hoyelos, Ibáñez, and Jerónimo (2014). Samples were taken in different universities; however, many similarities can be found in Spanish students' perceptions. Most studies divide positive characteristics between professional and personal features.

Gargallo et al. (2010) detect as the most important personal characteristics, respect for students (74%), accessibility for students (66%), capacity to listen (56%) and understanding (50%); while the lowest estimations focused on teachers being funny (4%), having good

humour (16%) or being attentive (18%). As professional traits, two qualities were stressed by 90% of the students; being competent in their subjects and having high communication skills, followed by preparing classes (74%) and being responsible (68%). Students gave less importance to punctuality (10%), intelligence (16%) and seriousness (20%).

Similar results were found by San Martín et al. (2014), who analysed almost 1,000 students from 12 different universities. Most students value, as personal characteristics, teacher who are close, pleasant, fair and patient. The qualities which receive less attention are disciplined, demanding and enthusiast. Regarding professional features, the most valuable is being able to deliver clear explanations, followed by motivating attitude and caring about students' learning. For students, the less important characteristics are: knowing foreign languages, punctuality, being a researcher and knowledge to address educational special needs.

4.2.5.6. SECONDARY EDUCATION STUDENTS AND FAMILIES

The World Bank shows Spanish gross primary and junior secondary school enrolment rates, for both girls and boys, being 100%. This information is also supported by the Ministry of Education, Culture and Sport (2013b).

The Ministry of Education official data estimated, in 2011, the average junior secondary education promotion rate as 74.3%, higher for girls (79.6%) than boys (69.3%). Data from a decade before was quite similar, when in 2001, the average promotion rate at this level was 73.4%. The graduation rate average, also in 2011, was severely lower in senior secondary education and the net promotion rate was 67.4%; again higher for women (74.9%) than men (60.2%).

As a general overview, in 2012, 24.9% of the Spanish population's maximum level of education was junior secondary education, 62.8% of 20-24 year-old graduated at least in senior secondary education, and 40.1% of 30-34 year-olds had completed tertiary education. In 2011, the net rate distribution of graduates at the tertiary level was 18.2% for non-university education and 31.6% for university education.

National information indicates that most graduations and enrolments are in public institutions, especially in senior secondary education, where there is a difference for public institutions: more than twice the students graduate from public schools and there are around a triple amount of enrolments. Still, in junior secondary schools there are, out of the total percentage, 20% more graduates (61.7% in public and 38.3% in private) and 30% more enrolments (65.9% in public and 34.1% in private) in public than private or state-funded

private schools. In Madrid, the distribution of students among kind of institution is notably different. All values are close to 50% for both types, except senior secondary enrolment, in which public institutions have around 20% more students than private or state-funded private schools (60.7% in public and 39.3% in private).

When comparing the relationship between enrolments and graduates, it is significant that in all cases public institutions' graduation rate is lower than enrolments, while for private and state-funded private institutions graduation rates are higher than enrolments. This may be related to the fact that, according to the OECD (2014d), 32.9% of students in Spain have repeated at least one school year in primary, junior or senior secondary education.

According to the Ministry of Education, Culture and Sport (2015b), when analysing data from the 2012/2013 academic year, the percentage of students' repeating school years is notably higher in public than in private schools. In the first year of junior secondary education, 15.9% of students stay in the same academic year in a public institution while only 6.9% do it in private schools. The rate is similar in the following years, 14.3% in public and 6.6% in private institutions in the second year, 14.6% versus 7% in the third year and 12.4% versus 5.9% in the fourth year. In senior secondary education, the rates are very similar, in the first year 15.9% of students retakes a year in public institutions while only 5.3% do it in private schools; in the second year 19.7% stay in the same grade in public school and only 7.7% in private institutions.

Table 4.22: Junior and senior secondary education students in Spain, 2013

	Graduates		Enrolments	
Regular junior secondary education	319,591	100%	1,808,502	100%
Public junior secondary education	197,255	61.7%	1,191,792	65.9%
State-funded private and private regular junior secondary education	122,336	38.3%	616,710	34.1%
Regular senior secondary[61] education	219,057	100%	634,604	100%
Public secondary education	150,696	68.8%	473,157	74.6%
State-funded private and private regular secondary education	68,361	31.2%	161,447	25.4%
Madrid junior secondary education	43,749	100%	240,567	100%
Madrid public junior secondary education	20,233	46.2%	124,017	51.5%
Madrid state-funded private and private junior secondary education	23,516	53.8%	116,550	48.5%
Madrid senior secondary education	32,677	100%	95,391	100%
Madrid public senior secondary education	15,945	48.8%	57,935	60.7%
Madrid state-funded private and private senior secondary education	16,732	51.2%	37,456	39.3%

Source: Recompilation from MECS (2015b) and Education, Youth and Sports Council of the Autonomous Community of Madrid (2015)

Students' role and performance

New pedagogical and didactic methodologies and philosophies, such as project-based learning or independent schools, are rooted in educational institutions, mainly in the compulsory stages. New organizations and priorities, such as the notion of competencies or transversal knowledge, are also emerging, not only in Spain but in the whole of the European Union, as well as in most developed countries, such as the USA or Australia.

In these new paradigms, students are expected to take an active role in their learning processes. Since learning is understood as the result of a dynamic and flexible process where knowledge is meaningful for students, they are likely to be participative, curious, cooperative and creative. Their relationship with their teachers allows them to have critical thinking, asking questions and posing doubts and alternative topics, even when they are not in the

[61] Secondary education statistics include students in vocational secondary education. Data correspond to the period 2012-2013.

syllabus or in the teachers' daily programme. Questions are understood as representing students' interest and curiosity, as well as an opportunity to deepen concepts or clarify doubts.

At higher levels, such as senior secondary education or university, the role of the student is expected to be quite similar, active, participative and questioning. However, teachers usually take a more expositive role. The real modification arrives during the evaluation system, still quite traditional in higher stages. Students are often assessed through written tests, and are expected to reproduce objective knowledge.

Spanish students spend, according to the OECD (2014e), an average of 7 hours a week doing their school homework. This ranks the 4th in terms of hours a week, out of all the OECD countries, only below Italy, Ireland and Poland. According to the Ministry of Education, Culture and Sport (2009a), in compulsory education most students attend, after the school day, extracurricular classes in a permanent and organized way. In primary school, most of the students, almost 73% take sport classes, 28.4% foreign languages, 24.9% music or dance, 22.3% art, 21.2% ICT and 6% theatre. In secondary school, where the last official information dated from 2002, the percentages are slightly lower: 62% have sport activities, 28% foreign languages, 26% ICT, 18% music and 6% dance (MECS, 2002).

In contrast to China-Shanghai, the PISA 2012 results in Spain (OECD, 2014c; MECS, 2014c) are lower in all of the subjects than the average of the OECD, and slightly inferior to the average of the European Union countries. In mathematics, the OECD average is 494, the European Union's 489 and Spain scores 484. In reading, the OECD average is 496, the European Union's 489 and the Spanish average only one point below the European results, at 488. The same difference is obtained in the sciences, where the OECD average is 501, the European Union's 497 and Spain's 496 points.

With these results, Spain obtains 33rd place in PISA 2012 with a main score of 484 points, very close to Portugal (487), Italy (485) and the Slovak Republic (482). European Union Member States' average in the main score is 472. Still, European countries' ranking widely differs from the Netherlands and Estonia with the 10th and 11th positions respectively, to Cyprus and Bulgaria at 46th and 47th.

However, when comparing results from different autonomous communities of Spain, according to the PISA data, the scores are extremely unbalanced. Differences between 40 (in science) and 56 (mathematics) points can be found between the autonomous communities with the highest and lowest grades. Out of the 14 autonomous communities participating in the assessment, seven obtained higher results than the OECD average in mathematics and

reading, while another two obtained equal or higher results than the EU average. In science, the number of autonomous communities with higher results than the OECD average increased to 9. The provinces above the OECD average in all subjects are Navarra, Castilla and Leon, the Basque Country, Madrid and Asturias.

Analysing the number of students who report skipping classes (arriving late for school) or school days in the two weeks prior to the PISA test, the OECD average is 25% and the European Union is slightly higher with 28.5%. The Spanish average is 15.5% higher than the EU average, with 44% of the students reporting being late or skipping school days.

Families' role

In Spain, families assume most of the responsibility for their children's education, shared with schools. This is confirmed by 95.6% of the population who think families are the first responsible agents for children's education, while 88.2% of Spanish families think the second responsible group is teachers. This is one of the data points extracted by Pérez-Díaz, Rodríguez, and Sánchez Ferrer in 2009, when carrying out a survey about 820 families' disposition towards their children's education. Similar studies with similar results have been carried out by Pereda, de Prada and Actis (2010), or the Ministry of Education, Culture and Sport (2014d).

Other core information includes the fact that 35.7% of parents think the main reason for children's academic failure is students' insufficient effort, followed by 25.6% who think that the main reason is low family collaboration. Besides this, 11.4% of families believe teachers have little dedication and 11.2% blame children's low interest in school contents.

Parents have the right to choose their children's school, which they select mainly on proximity (57.4%) and quality (36.7%). Families get involved in the schools through parents' associations, although their power to participate in the school administration is moderate. They also have meetings with teachers, at least two or three times a year for 50% of parents. Families think the level of demand in their schools is adequate (44.6%) or low (45.9%).

Generally, families do not prioritize competitiveness, as shown by the fact that 63.3% will chose a "centre where students get along with others and feel comfortable, avoiding too much competitiveness", over a "centre where the priority is making students outstanding in their studies, in a way children will get used to giving their maximum", only chosen by 29.4% of families.

Regarding homework, 46.2% of parents always or almost always try to help their children, while only 11.9% never or almost never help them. However, this percentage is higher in primary school, where 74% of parents help their children, than in junior secondary education, where only 14% support them. In one month, 17.9% of the parents tested school knowledge at home more than 20 times, while 35.9% tested it between 11 and 20 times, and 16% between 6 and 10 times. Only 3.8% of parents have never tested their children at home.

Families' expectations are evenly distributed. Still, 10% of families think their children will reach a maximum level of junior secondary education, 12.7% expect their children to reach a maximum level of senior secondary education, and 49% think their children will get into university, taking a 3-year degree (14.5%) or 5-year degree (34.8%).

Besides emotional support, families are the main economic supporters, at least until the children enter a higher institution. The Spanish National Institute of Statistics realized, in 2012, a survey about household expenses in education. It estimates that 39.2% of total household expenditure is allocated to education. During academic year 2011/2012, families expended around €1,319 on formal education and €484 on non-formal education per student. However, expenses in public, state-funded private and private institutions are extremely different. While in formal classes, parents from public schools spend an average of €32 in junior and secondary education, families in stated-funded private schools spent around €276 in junior secondary education and about €548 in senior secondary education; and the most expensive institutions, private schools, required families to spend €2,877 in junior education and €2,915 in senior education.

Families also cover other services, such as school meals (€427 in public schools, €846 in state-funded private schools and €1,173 in private schools, for junior secondary education), school bus, school materials, uniforms or books (about €291 in junior secondary education) and complementary activities (around €115 in junior secondary and €189 in senior secondary). Besides the official school schedule, families spend around €362 on extracurricular activities taught by the schools and €620 on activities organized for entities out of school.

4.2.5.7. QUALITY CONTROL AND STANDARDS FOR HIGHER INSTITUTIONS

The evaluation, qualification and accreditation of the Spanish higher education system are linked to an external quality assessment, carried out by the National Agency for Quality Assessment and Accreditation of Spain (ANECA), founded in 2002 by the Council of

Ministers. ANECA assesses the education system based on the European guidelines, aiming to adapt and harmonized Spanish education to the European Higher Education Area.

While its main focus is Spanish higher education, this foundation participates in several international and European quality assurance associations. ANECA is a founder member of the European Consortium for Accreditation (2003), the European Association for Quality Assurance in Higher Education (2003) and the Spanish Network of University Quality Agencies (REACU) (2006). It is also a member, since 2003, of the Latin American Network for the Accreditation of Quality of Higher Education (RIACES), the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), and the European Quality Register for Higher Education (EQAR) since 2008.

Institutional evaluation is currently divided into seven programmes. One programme, VERIFICA, evaluates new undergraduate degrees and Master's proposals made by universities in order to assess their compatibility and adequacy for the EHEA; two programmes assess the development of the degrees after being implemented. MONITOR makes a direct follow-up until degrees have to be submitted again to renew its accreditation, while ACREDITA checks the concordance between the initial programme design and its concrete implementation. If institutions are reaching for an international seal, ACREDITA PLUS covers this assessment, while AUDIT offers a guide for institutions to establish their own internal quality assurance systems. The last programme, MECION, establishes the standards and quality assurance processes for PhD programmes. ANECA has another three programmes to evaluate academic staff, and to help universities to develop their own procedures to evaluate their academic staff.

VERIFICA

According to the ANECA website, this programme is based on Royal Decree 861/2010 which establishes the regulatory framework for the organization and verification of recognized university degrees (Bachelor's, Master's and PhD). VERIFICA divides this initial assessment into ten criteria, which are in turn divided into several benchmarks. Annex 5 (REACU, 2011 and ANECA, 2012) sums up the core contents of the VERIFICA programme.[62]

[62] The complete list of benchmarks can be found in the Assessment Template for the Accreditation Ex-Ante of Bachelor and Master Degrees, published by ANECA in 2012. This template as well as the three basic document of VERIFICA can be consulted at:

MONITOR

Once the new degree has been approved and implemented in the university, an assessment cycle starts. This follow-up evaluation is framed in the MONITOR programme (ANECA, 2014) and aims to check if the implementation and results of the degrees are what it was expected and planned. Evaluation procedures last from the new degree registration in the University, Centres and Qualifications Registry until the next renewal of qualification period. Universities should undertake follow-up assessments every year, and fill in an online application designed by ANECA. External evaluation takes place every two years.

Follow-up assessments must be transparent and information should be public. Evaluations are divided into three parts: (1) how the degree is presented to new students and what information is available for current students, (2) how the study plan is implemented and verified through the teaching guides, and (3) evidence about the implementation of the internal quality system and the improvements this system is promoting.

The evaluation criteria are organized into degree management, resources and outcomes. Annex 6 sums up the follow-up assessment criteria for every degree in Spanish universities. Teacher education, like any other degree, had to adhere to these benchmarks of quality.

4.3. CHINA AND SPAIN'S CULTURAL DICHOTOMY

4.3.1. WEST-EAST SOCIAL VALUES AND CULTURAL FEATURES. IMPLICATIONS FOR EDUCATION

The educational aspects of each society only make sense in light of their social characteristics, philosophies and ways in which each of the societies understands the world. At the same time, sociocultural values affect personal paths, experiences, expectations and fears. Hence, the aim of this section is, under guiding values of respect and understanding diversity as a positive feature, to comprehend how East Asians and westerners see, communicate and appreciate their world and build their personal values and their relationships within their communities, and how these dynamics have effects in the educational context.

As Bruner (1996) notes, it is essential to consider the nature of mind and the nature of culture, since "[…] theory of education necessarily lies at the intersection between them. We

http://www.aneca.es/eng/Programmes/VERIFICA/Ex-ante-accreditation-VERIFICA-Bachelor-and-Master-Degree2/Assessment-protocols-and-supporting-documents [June 1, 2015]

shall, in consequence, constantly be inquiring about the interaction between the powers of individual minds and the means by which the culture aids or thwarts their realization" (Bruner, 1996, p. 13).

Cultural descriptions are always broad, but they help to identify some basic differences that may have an impact on the lives of students and adults who have spent at least nine years in their educative system. This section tries to expand two key elements of the study. The first tackles general social values under a perspective of historical heritage. This overlook is justified by the fact that "[…] a cultural approach to the study of comparative education is important to counter some increasing trends in the economistic analysis of school effectiveness that rest on productivity-oriented criteria, an analysis that is used on every level of education from early elementary school up to the tertiary level" (Currie and Vidovich, 1996 cited in Masemann, 2003, p. 115). The second element focuses on how these values are perceived in today's education, by teachers, students and families, in China and Spain, complementing the information in Sections 4.1.5 and 4.2.5.

Richard Nisbett[63] (2003), one of the numerous experts who have studied this matter, focuses his analysis on Asian and western cultural psychology and how societies' roots in history have led to people's current view of the world. Small, yet large, differences are currently being found between Asians and westerners in several features such as perceptiveness, group work, language, perception of life and independence. Ancestral philosophies, social organization and hierarchies, geography and commerce, among others, have left a signal in today's societies. Professor Nisbett argues that western culture is a product of Greeks and Romans, the two biggest empires in European history, and Christianity as one of the main religions, and their following developments (the Renaissance, Reformation, the Enlightenment).

On the other side, it is widely accepted by researchers that Chinese culture is the result of the interaction between three systems of thought, Confucianism, Taoism and Buddhism (Yee, 2002; Faure, 2003; Wang, T. 2004; Zhang and Zhong, 2003; Wang, J.L., 2013). As a result, according to Professor Nisbett, while ancient Asian societies sought social harmony and community coherence, seeing debates as a rupture in harmony and avoiding any kind of

[63] Due to topic relationships and space, the general ideas expressed by Nisbett are only summarized. However, if the reader is interested in these subjects, Professor Nisbett offers numerous examples and explanations backed up with current investigations to understand the differences between Asian and western countries' underlying values.

confrontation while finding a Middle Way through self-control, the Greeks were working for freedom, in societies that endorsed personal initiative, personal expression and debates as a way to improve their knowledge of the world and to understand the rules that govern nature.

Lisbonne-de Vergeron (2007) also recalls these differences between European and Chinese foundations: while European civilizations' values are based on religion and look for progress before stability, the Chinese value harmony more than change and their foundations are rooted in philosophy. According to Chan (1999, cited in Charlesworth, 2009), the differences between western and Asian educative systems follow their historical conception of society.

These standards are also stressed by other experts, such as Professor Zhang Lihua (2013), who summarizes Chinese traditional values as harmony, benevolence, righteousness, courtesy, wisdom, honesty, loyalty, and filial piety. She adds, that of all those, the core value is harmony. For instance, she cites a Chinese saying, "Everybody is responsible for the rise or fall of the country"[64] (Zhang, 2013), enhancing a strong sense of community and shared responsibility towards the country. Westerners' sayings, on their side, often refer to democracy, self-responsibility or freedom as core values, for instance in the well-known saying "I disapprove of what you say, but I will defend to the death your right to say it" (Beatrice Evelyn Hall, 1906, cited in Knowles, 2006, p. 55) or in traditional literature as in Cervantes' book when Don Quixote say to Sancho Panza: "Freedom, Sancho, is one of the most precious gifts that heaven has bestowed upon men; no treasures that the earth holds buried or the sea conceals can compare with it, for freedom, as for honor, life may and should be ventured" (Cervantes Saavedra, 1615, Chapter LVIII).

Differences are justified by historical reasons, since in ancient societies the basis of education was already rooted in dissimilar objectives. The Greeks understood school as a way to develop personal growth (Nisbett explains the Greek origin of the word 'school', which means 'leisure': for the Greeks it meant freedom to pursue knowledge). On the contrary, Chinese schools and education have always been understood as a way to improve power and wealth.

Ancient values are still latent in each society, making subtle differences between Asian and western conceptions about education. East Asians lived in a world where balance and interdependence was the key to survive in harmonious societies, where each person had a

[64] In Chinese: 下兴亡，匹夫有责.

role towards the community and belonged to a certain level of a hierarchy. As citizens used to accept a hierarchy, Asians tend to find a leader in every community. The leader role is to organize internal relationships and duties in the group. Inside the classroom, the leader is the teacher, and "although there may still have been some group discussion, there is a strong probability that the discussion would be focused on this teacher" (Powell, 2014, p. 24).

In contrast, westerners were living in societies which promote citizens' independence, free will and egalitarism and where status depended on personal initiative. Citizens were encouraged to make choices, not along a certain community line, but according to what they consider rational.

When making decisions, the terms 'rational' or 'common sense' were, and still are, rarely used in Asian societies, since they prefer the notion of reasonable over rational. East Asians tend to understand every object within a context, looking for interdependences and relationships, while westerners look for logic and objectivity. A Chinese saying stresses "When you will have understood the whole, then you will understand the parts" (Faure, 1999 cited in Faure, 2003), and westerners develop "concepts in order to separate ideas from the object. To conceptualize is a way to intellectually distance oneself, to dominate reality" (Faure, 2003, n.p.).

As a result of these ancient cultures, studies support the idea that East Asians are better than westerners when working with and understanding concrete concepts, however westerners have more facilities than Asians to understand abstract notions. As Nakamura (1964) presents it, in Faure (2003), "the Chinese way of thinking puts the emphasis on the perception of the concrete, leading to the non-development of abstract thought". Both the stress on relationships or objects, and the focus on concrete or abstract facts are easily perceived when analysing Asian and western languages. While Latin letters do not directly represent anything and the signifier and the signified have no relationship, Chinese characters are full of meaning by themselves, language is concrete and the emphasis is put on verbs (which connote relationships) over nouns (connoting single elements, and stressed in western languages).

Language is the tool that structures mentality, and it seems that language differences have maintained the gap between Chinese and western cognitive processes (Faure, 2003; Faure and Fang, 2008). As Chen stated in 1999, "there is no doubt that Chinese people see the world differently from Westerners for two obvious reasons: the radically different nature of

the Chinese language, and the isolation in which Chinese civilization developed" (Chen, 1999, cited in Faure, 2003, n.p.).

It is also through language that several studies have detected how Asian citizens are more encouraged to think about others' feelings and to show greater empathy when acting. Because of empathy and group harmony, criticisms tend to be indirect or inexistent. Instead, when accomplishing a certain job, East Asians are more likely to develop self-critique and to look for outside motivations (inside their community or family). This East Asian behaviour is another heritage trait of the fact that Confucius particularly stressed courtesy in daily life (Wang, T., 2004). On the other side, their social group is so important that East Asian citizens live to preserve the essential component of social face. "Face-saving, face restoration, and face giving are crucial values. The Chinese live in the eyes of the others and have a quasi-pathological preoccupation with reputation. Social judgment as a personal asset and as a family asset is considered as vital" (Faure, 2003, n.p.).

Face-saving and hierarchy affect school relationships and dynamics. For example, Foster and Stapleton (2012) find some traits in how debates may not always be appreciated in Chinese classes, in which there exists a strong hierarchy. A student expressed, "Chinese people don't want to talk with the professor directly and they want to share their opinion with their friends and classmates", and added "if you ask some silly question you are very embarrassed and all the students will laugh at you" (p. 307). These two principles, not talking to the teachers or asking questions (which have no deep implications for western students) not only show the strong roots of hierarchy and group harmony, but also highlight the notion of face in learning process. As Faure (2003, n.p.) notes, "not showing ignorance is more important than telling the truth. Maintaining face has priority over the accuracy of the answer".

On the other side, westerners like to debate and are encouraged to express themselves and to look for their own motivations. Because of this type of interaction, their way of expressing critics or disagreement is usually much more direct, and motivation comes from themselves according to their interests and goals and not from their community. For example, Nisbett recalls a psychological study between East Asians and westerners, with three types of task: a task chosen randomly, a task chosen by the student and a task chosen by the students' mother. The study showed how westerners work harder when they choose the task, while East Asians work harder when others choose the task for them.

In the same study, westerners work harder when they have good results in a task, since they understand that "they are good at it, and they can get very good" (p. 59). This predisposition is linked to the western concept of fixed IQ, which gives each person specific qualities (Starr, 2012). In contrast, East Asians work harder when they have obtained bad results, since they understand "I did not try hard enough, but I can do it better".

In western culture, as a heritage of Catholic values (Starr, 2012), it is understood that each person is unique and has unique capacities, therefore some objectives would be easy to reach for one person but could be impossible for another. Religious values have a great weight in many countries. In Asia, because of Asian philosophies, which do not specifically enter schools but are integrated in the Asian psyche, every person is seen as capable of reaching all the educative objectives and success mostly depends on personal efforts.

The concept of trying hard and assuming that one can do better also comes from Confucius. There may be slower people, but with help from teachers or other students outside class, all of them can succeed (Starr, 2012). Confucius, regarding the role of education, stated: "Those who are born with knowledge are the highest type of people. Those who learn through study are next. Those who learn through hard work are next. Those who work hard and still do not learn are really the lowest type" (Analects 16:9) (Confucius, cited in Starr, 2012, p. 9).

In the classroom, these conceptions about hierarchy, face, debate, harmony, hard working results or source of motivation have a great impact on classroom participation. On one hand "It is the tradition for Chinese students to be low key [rather] than to be in the spotlight" (Foster and Stapleton, 2012, p. 307). On the other, "Westerners have faith in the rhetoric of argumentation in arenas from the law to politics to science" (Nisbett, 2003, p. 77). Other examples are found in Kettula et al. (2013), when a teacher notes, "As a usual lesson in China, teacher will explain many; students sit there silently and listen. The same lesson in Finland, the main function for teacher is to guide the students. Discussion is very important in their teaching and learning" (p. 375).

Chan (1999, cited in Charlesworth, 2009), sums up some of the main traits differentiating East Asians and western educative systems. The western educative system focuses on individuals and the development of their full potential, and education has as objective to transmit cultural heritage, stressing understanding, application and ability while using educational psychology. The learner is active, and the curriculum is orientated from the present to the future, promoting social interaction. On the other hand, East Asian education

focuses on loyalty, transmitting past cultural heritage and selecting future leaders. The centre of education is the teacher, who recalls facts and uses exams as a way to motivate students, who are passive learners. Curriculum orientation starts from the past until the present, and contents are more important than facts.

In this context, examinations have a great weight in Chinese students' lives: their futures, their social prestige and the quality of life of their families depends on the results of certain assessments. This situation is very stressful for students and their families, since "a single point difference can spell radically different life options" (Hulbert, 2007, cited in Powell, 2014, p. 10). In turn, schools need to cover students' and families' demands to reach the highest marks, which forces schools to be content-driven (Powell, 2014).

In a similar line of expectation, teachers aiming to control classes do not address personal needs, as expected by both teachers and students (Ho, 2001, cited in Powell, 2014). These personal needs which are not covered include the adaptation of learning materials or styles (Powell, 2014). On the other side, in western cultures, assessments are usually taken as an external control of quality, and rarely as a motivator.

Methodologies are also affected by cultural principles and national values. In part because of the traditional assessment processes and respect for hierarchies, East Asian education promotes individual work following the teacher's advice, as a leader; morals and ethics are often worked into school contents, for instance Communist Party values in China. Meanwhile, westerners tend to work in groups, dividing responsibilities among students. In the west, morals and ethics are usually treated as general competencies, beside the values of democracy and human rights.

As a consequence of the great competitiveness and traditional role of teachers and students, Chinese methodology emphasizes memorizing and disciplinary knowledge. Holliday (1994) finds that teachers in large classes, as in certain Chinese cities, are considered the "fount of knowledge, which is delivered without any concession to students", and students must "struggle to attain" the knowledge delivered by the teacher (p. 59).

However, current reforms are trying to balance what Chinese authorities have detected as overemphasizing disciplinary knowledge (Xu and Connelly, 2009, cited in Powell, 2014), since these two components were "[…] once seen as critical tools of education, but a new value for individual development and 'real life applications' of knowledge have emerged in the system itself" (Li and Ni, 2012, cited in Powell, 2014, p. 14). This balance is difficult to

reach, since teachers value memorization as a technique of success, based on their own experiences (Wang, T., 2004; Powell, 2014).

Nonetheless, current values are changing on both sides of the world. As Zhu notes (in Faure, 2003), western and Chinese values are now driven by four main concepts: (1) expansionism (ideas from western countries and goods from China); (2) individualism (liberation of personality, the right of freedom for individuals in the west and introduction of modern methods of management and personal responsibility and individual excellence in China); (3) liberalism (freedom of belief, speech, action, free competition and trade in the west and free competition and trade with the market economy in China); and, (4) utilitarianism (seeking effectiveness, efficiency and self-interest for westerners, and satisfying market trends needs where lack of efficiency is sanctioned in China). Another main concept, the heritage of western religious history, is present in western cultures but does not appear in Chinese values: salvation. This term refers to having 'a mission' in life. The author adapts this old concept to the contemporary 'human rights diplomacy'.

The changes of both societies towards the other is also expressed by Nisbett (2003), when realizing that many of the psychological studies show "westernization" in China and "easternization" in America. For instance, one of his studies (Nisbett, 2003, p. 221) shows that Beijing University students valued equality, imaginativeness, independence, broadmindedness and varied life more than students from the University of Michigan. And, in turn, American students report valuing self-discipline, loyalty, respect for traditions and honouring parents and elders more than the Beijing students did.

4.4. SUMMARY OF THE CHAPTER

From its onset, this research has aimed to combine the complex components of national education systems, in which territorial, economic and political features have a high degree of impact in education. This chapter is divided into three sections, regarding China, Spain and the relationship between them. Each national section begins by introducing their main characteristics in terms of political organization, territory and economic features, followed by a presentation of the countries' situation and participation in their own continental circumscriptions and international fields.

The chapter also tackles the organization and specifics of countries' general education, legislation and future agendas, to further detail secondary education programmes and the roles of teachers, students and families. The roles are idiosyncratic to culture and influence

the establishment of certain dynamics in education. The last subsection tackles basic elements of culture to appreciate education's underlying philosophies and cultural expressions.

Overall, this chapter emphasizes how countries from distant parts of the world and with major differences in core elements such as politics or economy, are subject to supranational tendencies in general elements of education. It also evidences how each country is immersed in and closer to geographical groups, the European Union or East Asian countries, which in turn promote educational exchanges and the harmonization of their education policies. Besides this, the chapter confirms the incremental relevance and attention to secondary education, through recent policies and agendas, and the importance of culture in each of the education levels and agents.

The next chapter addresses secondary teachers' initial education.

CHAPTER 5

SECONDARY TEACHERS' INITIAL EDUCATION: DESCRIPTION AND INTERPRETATION

This chapter develops the phases of description and interpretation. As in Chapter 4, it is divided into the same sections for China and Spain, and includes a last subsection for international guidelines on teacher education. Besides developing the categories corresponding to the main concepts explained in Chapter 3, the chapter frames teacher education under a historical overview, describes current dilemmas and challenges and explains the present legislation and regulations regarding teacher education. The last subsection shows a selection of international guidelines and standards. The international guidelines exclusively refer to quality in teacher education.

5.1. CHINA

5.1.1. HISTORICAL PERSPECTIVE

Education has taken a highly relevant role in Chinese societies since the era of Confucius, when it became a central element and motor for improving social and economic status. Hence, teacher education has a long tradition, starting more than 2,000 years ago, and has in consequence undergone several modifications, often without national consensus or taking place outside higher and formal institutions. However, for the purpose of the study, this

section addresses the development of teacher education during the last century, during which formal institutions and programmes started to arise, mainly focusing on the period in which China was created as a country, began its economic recovery and its later openness to the international field.

Hu and Verdugo (2015) detect, since the beginning of the 20th century, four stages in Chinese teacher education policies attending to criteria of underlying philosophies, which have had an impact on structures, institutions and contents. The four periods are also directly related to other countries' teacher education, since China has a long tradition of borrowing systems as well as a dilemma finding a balance between Chinese traditional values and western ideologies of education. According to Hu (2014, p. 13), "The history of Chinese teacher education is a history of borrowing".

The stages, covering a century of Chinese history, are influenced by the Japanese (1897-1992), American (1922-1949) and Russian models (1949-late 1960s), leading to the current stage, considered to be properly looking for a Chinese model (early 1980s-now). A schema and timeline illustrating teacher education development in China according to these models, and framing secondary teachers' education along political changes as well as the main milestones in education is represented in Figure 5.1.

The figure takes as starting point the establishment of the first normal school in China, Nanyang University Normal Institute, under the Qing Dynasty, which occurred two years after the end of the Sino-Japanese War (1894-1895), and around 200 years after the creation of the first western normal school in France, the Institute of the Brothers of the Christian Schools (Li, J., 2006). At that time, several intellectuals proposed learning western sciences and technology to cover two objectives: to build a strong nation and to fend off western influences (Liu and Xie, 2002, cited in Hu and Verdugo, 2015). Shortly afterwards, in 1902, Hubei Normal School, the first independent normal school, and the Imperial University Normal Institute, the first national higher normal school, opened.

At that time, the country started to promote the importance of formal education, and therefore the need for teacher education institutions. Before these initiatives, in the 1890s, there was no official education system for teachers (Li, J., 2006). The admission procedures for the new institutions were very strict. Besides the entrance written and oral examination, candidates were required to have a recommendation letter from the governor and documents confirming academic and moral qualities (Hu and Verdugo, 2015). At that point in time,

teaching officially became a ladder towards a better socio-economic status (Liu and Xie, 2002, cited in Hu and Verdugo, 2015).

The Qing Dynasty was the last dynasty in China. After its fall, the Japanese system, in which teacher education was free and mainly focused on moral character, continued. However, its goals switched towards a more democratic view. In 1912, under the new administration of the Republic of China, important advances influenced teacher education. The new government passed two key pieces of legislation, the Teacher Education Act and the Normal School Regulations; and, trying to adapt its structures to the imbalanced Chinese backgrounds, set up a district system for normal schools for the first time in China's history. Shortly afterwards, in 1916, the first licensing system for elementary school teachers was established (Li, J., 2006).

Teacher education took place in two kinds of institution, primary normal schools for primary teachers and advanced normal schools for secondary teachers (Li, J., 2006; Hu and Verdugo, 2015). Secondary teachers' education was planned as a 4-year degree, with one year of common courses and three years for each major. The programmes included a period of practicum, but, in reality, most students were not given the opportunity to participate in any kind of practice (Cui, 2006, cited in Hu, 2014).

Shortly before the start of the new Republic of China, two social movements promoted by young students and intellectuals who returned from western countries and who aimed to rethink Chinese traditional values intervened in the field of Chinese education: The New Culture Movement (1915-1921) and the May Fourth Movement (1919). They aimed to search for new gender identities: for instance, the emancipation of women arose as a strong idea. The movement exalted western ideas, principally science and democracy, and questioned Chinese traditional values (Encyclopaedia Britannica, n.d.; New World Encyclopedia, n.d.).

Under these circumstances, the teacher education paradigm progressively turned towards an American model, alongside influences from France and Germany (Yang, X.R, 2010), in which teachers were trained in secondary schools, colleges or comprehensive universities, under a more open and autonomous paradigm. Normal schools and universities disappeared, but education majors started to be more detailed. Also in this period, a 2-year Master's of Education was established, while other universities continued with the 4-year undergraduate programme. The period of practicum started to gain relevance, and certain orders were issued to help universities to design their practices. The practicum started from the 3rd year and

lasted for several weeks. In addition, before obtaining a teaching certificate, students spent a whole year as practicum students.

Nonetheless, the American model, which is similar to the current model, started to be criticized by several intellectual and scholars claiming a disconnection from Chinese needs and culture. Institutional freedom had led to a situation in which goals, methods or systems were highly different among institutions, sometime considering teacher education as second-rate majors. The free tuition policy was eliminated, and the degree lost numerous students and much status.

The American model, like the Japanese model, lasted around 25 years, then the new People's Republic of China strengthened its relationship with Russia and began to move towards their model. The creation of the People's Republic of China, as it is known today, in 1949, started a situation of turmoil which affected the political and economic fields and, unavoidably, education. Chinese people were urged to provide teachers for early childhood, primary and secondary education (Li, L., 2014), hence the promotion of teacher education.

At the beginning of this period, which reflected the Russian model, two milestones promoted and affected teacher education: The First National Meeting on Teacher Education (1951) and the Regulations on Higher Normal Institutions (Draft) (1952). The Chinese Government re-established the district system for normal schools (Wang, 1997, cited in Li, J. 2006), and returned to a previous model, setting up independent institutions for teacher education.

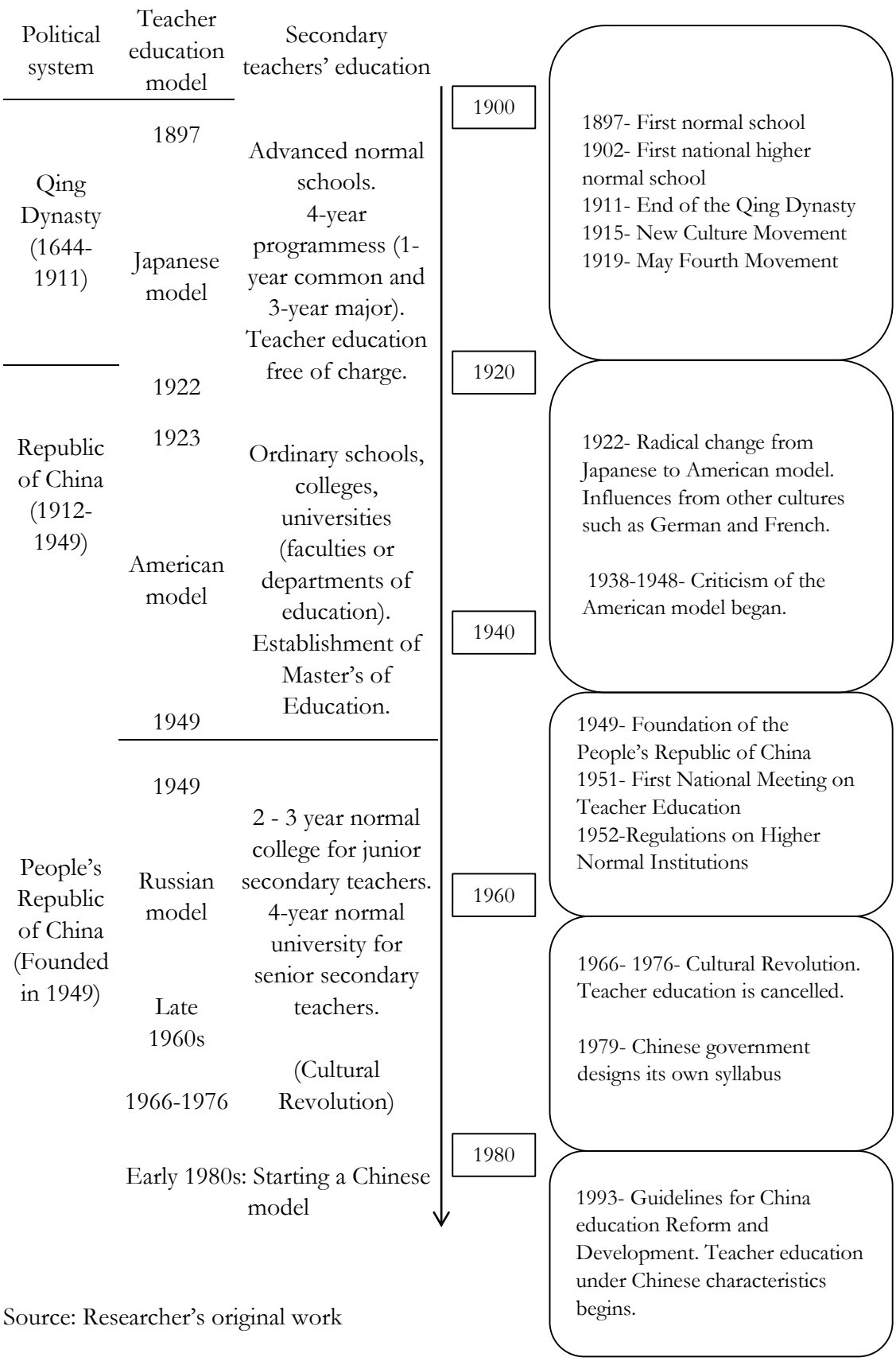
Normal schools and universities returned to the educative landscape, categorized into four types of institution: pre-school normal schools for early childhood education teachers, normal schools for primary school teachers, 2- or 3-year normal colleges for junior secondary education teachers and 4-year normal universities for senior secondary education teachers. At that time, following the Russian system, the government exerted tight control over curriculum, structure, contents and textbooks (Hu, 2014). Free tuition returned and a mixed model was established. According to Hu and Verdugo (2015), "it was also a time when most of those who were admitted to teacher education programmes were ambitious, patriotic, young people who hoped to change China through education" (p. 40).

Globalization, social development, communications development and new technologies, alongside the fact that China became a world power, led to a situation in which the Russian

model could no longer cover Chinese needs and the Chinese authorities started to look for their own way. In 1980, the Fourth National Meeting on Teacher Education was held, highlighting among other principles, the role of teacher education as a foundation for national education development (Li, J., 2006).

The time distinctions between the models are neither sharp nor categorical, since educative systems needed time to adapt and reform their structures and plans. Generally speaking, the change from a traditional to a modern model was enhanced when China, in 1978, opened up to the world and started international trade and exchanges. At that time, in fact, teachers needed to have graduated from a superior level of normal high schools or colleges, not always higher education institutions (Yang, T.P., 2012). Still, in 1983, the required qualification for primary and early childhood education schools teachers was a junior (middle) secondary normal school diploma (3 to 4 years) and the entry requirement was having a junior secondary school qualification; for junior secondary school teachers, the requirement was a diploma from a senior secondary school or a normal college (2 to 3 years) which selected senior secondary graduates; and, teacher education for senior secondary school teachers took place in normal universities (4 years) after passing the university entrance examination (Li, J., 2006; Yang, T.P, 2012; Li, L., 2014). Figure 5.1 graphically sums up the Chinese development of teacher education.

Figure 5.1: Evolution of secondary teachers' initial education in China



Source: Researcher's original work

Since the mid-1980s, the Chinese Government has published several new regulations and reforms on teacher education. Progressively teacher education programmes in middle and higher normal schools were replaced by plans in higher education institutions, colleges and universities, where they are today. One of the main benefits of this upgrading of teachers' plans, besides improving teachers' professionalization and status, was the implementation of real practices inside schools. Before this renovation, programmes rarely included student practice inside classrooms, either active or observation, and most of the classes focused on discipline subjects (Li, L., 2014).

According to Yang, T.P. (2012), during this process in which teacher education took a primary role in Chinese education while opening up to the international context, several normal schools adapted their structures and programmes, trying to grow and adapt to new requirements. Some expanded or upgraded into multidisciplinary or comprehensive colleges, or upgraded to institutions of higher education, through both internal and external development (coalition with other normal or comprehensive colleges, diversification between pre-service and in-service education, and establishment of departments of teacher education in non-normal schools). Simultaneously, teacher education underwent a process of marketization, privatization and decentralization (Li, J., 2006).

It was also in this last period, relatively recently, that the government settled the six normal universities directly under its leadership as examples for other institutions. It also established more than 30 key normal universities in different regions (Yang, T.P., 2012), which resulted in the harmonization of general lines of teacher education. Yang, T.P. (2012) categorizes this last period, in which China is setting its own system and model, into three stages: restoration and reconstruction (1977-1985), reforms and opening up to the outside world (1985-1998) and remodelling and upgrading (1999-now). The main landmarks of each period are explained in this section, including contributions from Li, J. (2006), Yang, X.R. (2010), Yang, T.P (2012), Hu (2014) and Hu and Verdugo (2015).

In the first stage, restoration and reconstruction, China was implementing its own model, looking for its own identity to embody its essence, to cover its current needs, and settling up a strong, official and stable system of teacher education alongside its general education system. To reach these goals, China released several regulations and national orders, tackling not only initial teacher education but in-service education as a way to improve and update teachers' knowledge. The main milestones of this period are:

- 1977: *Instruction for Training of In-service Teachers*. Because several teachers had a serious lack of training, mainly in rural areas, this initiative focused on in-service education for teachers prepared in previous systems.

- 1978: *Instructions for the Reinforcement and Development of Teacher Education.* This initiative set up a number of normal colleges and, programmes of initial teacher education between 3 to 5 years.

- 1979: for the first time Chinese government designed its own syllabus without "copying any model with almost no revision".

- 1982: *Provisional Regulations for Strengthening the Construction of Normal Colleges*. This regulation standardized and promoted the construction of normal colleges.

- 1986: *Law on Compulsory Education*. This established the teachers' qualification system and the 9-year compulsory education. The same year, *Instructions for the Strengthening and Developing of Teacher Education* classified middle normal schools, 3-year colleges and 4-year teacher educational institutions of higher education, highlighted the relevance of teacher education and set certain standards.

The second period, reforms and opening up to the outside world, deepened and detailed the initiatives started in the previous stage, and widened the system to offer quality teachers to remote and poorer areas. In education matters, the Chinese Government started sharing and participating in the international field, while reforming and updating its own system. Four key elements relating to teacher education are worth mentioning here:

- 1985: *Decision on the Reforms of the Educational System*. This established that all graduates from normal colleges and universities should be assigned to teaching positions. It also encouraged graduates from other institutions of higher education to enter the teaching profession.

- 1993: *Guidelines for China Education Reform and Development.* This promoted teacher education institutions and other institutions to participate in the education of primary, junior secondary and vocational schools. Like the preceding decision, it encouraged other excellent graduates from non-normal universities to teach in primary and junior

secondary schools. The *Teachers' Law of the People's Republic of China*, tackled in the Section 4.1.5, was also released.

- 1996: *Teachers' Training Institutions Work Order* and *the Fifth National Meeting on Teacher Education*. This order, explained in Section 4.1.5 and the National Meeting aimed to strengthen and improve the teacher education system, giving the main role of teacher education to normal universities, as specialized institutions. It noted that other comprehensive institutions can complement this education. It boosted the idea of a teacher education model with Chinese characteristics.

- 1997: The free teacher education policy was cancelled. As seen during this section, teacher education was historically free of charge for student teachers. Its cancellation created three major challenges: low admission rates of prospective students, loss of identity as teacher education institutions and a slowdown in the development of teacher education.

The last and modern period, remodelling and upgrading, officially upgraded teacher education to higher education institutions, widened the set of universities offering teacher education programmes and tuned its main elements to international standards. The core changes were:

- 1999: all teachers started to be prepared in higher education institutions. The previous 3-level teacher education institutions (normal universities, 3-year normal college and normal schools) changed to 2-level ones (normal university and 3-year normal college). There were three types of programme: 3- or 4-year colleges for primary teachers, 4-year colleges or university for junior secondary school teachers, and 4-year or post-graduate programmes for senior secondary teachers.

- 2001: *Decision on Basic Educational Reforms and Development.* This decision used the term 'teacher education' for the first time.

- 2003: Teacher education started to take place in other higher education institutions, besides normal universities and colleges.

- 2007: *Schema for the Educational Development in the 11th Five-Year Plan*. This promoted the construction of an "open, flexible and standardized teacher educational system upgraded in its leveling and quality". In addition, the free teacher education policy was restored in the six universities under the leadership of the central government.

This progression, along with the effects of globalization and Chinese intervention in the international arena, led to dilemmas and difficulties in the current system for preparing teachers. The next section addresses these dilemmas, before tackling the current secondary teachers' initial education system in depth.

5.1.2. CONTEMPORARY DILEMMAS AND GUIDELINES FOR REFORMS

"Social and educational reforms over the past 20 years have had a huge impact on teacher training in China" (Wang, Y.M., 2011, p. 15). This statement is widely accepted and shared among Chinese society, as is the fact that investment in teacher education is essential to the country's modernization (MOE, 2010a; Wang, Y.M., 2011; National Institute of Education Sciences, 2015). After the establishment of the 9-year compulsory education (through the already mentioned Compulsory Education Law of the People's Republic of China, 1986), the Chinese Government started struggling to cover all of the positions needed for teachers across the whole country. Because of this development, Chinese teacher education, according to Zhong (in Wang Y.H., 2007), professor at East China Normal University, is in a critical period, dealing with both quantity expansion and quality improvement. As a result, diverse policies have emerged to educate highly qualified teachers, essentially of primary and secondary school.

Another milestone, mentioned earlier, in Chinese education history was the Teacher's Law (1993), which also promoted numerous initiatives to break through the old system of teacher education. However, as Professor Zhong (in Wang, Y.H., 2007) states, in previous reforms there was no fundamental change in the overall pattern, teacher education curricula remained scarce, psychology and teaching theory were only taught in a few courses and there was a short teaching practicum. That is why most academics and teachers see teacher education reforms as key to institutional innovation and as a way to develop the teacher education curriculum standards.

Owing to China's rapid development, the need for highly qualified teachers swiftly moved from compulsory education levels to senior secondary education, and shortly later to

higher education. Because of this progress, the growth of debate on China's education has led to many new policies relating to all education levels and professionals. In that context, and because teachers are considered a key element for renovating the whole system, teacher education has undergone a deep transformation in the last decade.

Researchers and policies are trying to address some of the common dilemmas in the Chinese teacher education system; namely, how to encourage the individual growth of both students and teachers while promoting a growth in creativity (Song, 2008a); to deal with the overemphasis on exams (Powell, 2014) while establishing a fair system of selection; to encourage teacher development and establishing a harmonized system nationwide; and to prepare teachers to switch from a traditional role model to a new one, where teacher-focused classrooms are still preventing student collaboration (Kettula, Lampinen, Fan, and Jiang, 2013); to deal with very wealthy and resourceful families and very poor families; and to adapt their teaching to different areas, where access to information is very easy, like urban areas or rather complicated, as in rural areas.

Chinese policies are also dealing with excessive subject specialization which prevents inter-subject collaboration (Song, 2008a), and the fact that upgrading, restructuring and expanding Chinese higher education institutions must be done alongside the development of quality standards (Zhong, 2006, cited in Wang, Y.H., 2007). Motivation to become a teacher is also an issue in current Chinese society. For instance, according to a survey in Hebei Province, less than 40% of students love the teaching profession, which lowers teachers' status and identity, and has led to a situation where student teachers use low language standards, are not willing to adapt and adjust their teaching to students' needs and show attitudes of unwillingness during practices (Yin and Tang, 2014).

In addition, as a consequence of globalization and China's recent increase in power, reforms are sitting between two stools. On one side, international collaboration and western models are highly recommended by some authors, always adapted to the Chinese context and never exported without previous research about context and culture (Kettula et al., 2013; Powell, 2014). On the other side, discrepant voices advise the risk of borrowing methodologies which have never been tried in the Chinese context, and which seem ineffective in reality (Wang and Ross, 2010, cited in Powell, 2014). Western methodologies, in turn, have their own weaknesses when translated to the Chinese setting, being time-

consuming, difficult to use in big groups, or sometimes having high requirements of human or material resources.

Currently many actions related to teacher education are being taken to fulfil China's new social, economic and educative demands. The improvements started in 1998, when the Chinese Government decided to start a wave of reforms to ensure that teachers were accordingly qualified and committed to teaching (Wang Y.M., 2011). In that regard, according to Zhong (interviewed by Wang Y.H., 2007), in 2005, the Ministry of Education launched a proposal on teacher education reforms to cover contemporary social and educative demands, such as innovation and curriculum construction. Among other documents, the project included two proposals: "teacher professional standards" and "teacher education curriculum prospective". These initiatives were the seed for further development in teacher education.

In 2007, Zhong (cited in Wang Y.H., 2007) already anticipated the core ideas of a broad educative reform in the Chinese context. The concepts cited by Zhong have been later confirmed by official documents as the driving ideologies and philosophies for the new teacher education system. Zhong (cited in Wang Y.H., 2007) highlights that a solid ideology must guide teacher education curriculum reform, and stresses the need to synchronize the curriculum with social development and with the national education policy, to focus on the improvement of teacher education quality as well as promoting teacher professionalization. The rupture with the oldest and traditional curriculum of teacher education has also followed three basic points. First, it is not a conservative or closed curriculum but rather open, giving space for creation and innovation. Second, it would look to educate a "not perfect teacher" rather than to develop an already "perfect teacher", and third, it would include a collective dimension, not limiting the education to an individual teacher but to highlight teachers' professional qualities, responsibility, comprehensive education on subjects and pedagogy, giving access to a rich educational practice and experience, etc.

Therefore, academics and research groups aim to establish a new teacher curriculum which can cover four objectives: switch the emphasis from a traditional teacher-centred to a student-centred perspective; change from subject-based teaching to comprehensive knowledge which promotes holistic development and integrates the 'old three' (education, psychology and pedagogy) into learning areas, modules and credits; adapt the teacher education curriculum to the actual needs of students; and strengthen practical aspects,

establishing fluid cooperation between universities and schools and promoting lifelong learning (Zhong, in Wang, Y.H. 2007).

Besides initial teacher education, which can tackle new teachers and therefore can introduce new methodologies and roles in schools, the Chinese Government is changing education from the roots. Consequently, continuous education for senior teachers is being promoted; hence the educative administration recently launched a plan referring to short-period and continuous teacher education. In 2010, the Ministry of Education of the People's Republic of China (2010b), published the *National Education Plan for Primary and Secondary School Teachers*, which initially received ¥550 million (approximately US$90 million) in funding. This plan, if not referring to initial teacher education, aims to builds bridges from initial to continuous education, and started a wave of reforms affecting all teaching staff, senior, junior and teachers-to-be.

The project was encompassed as one of the *Long-term Education Reform and Development Plan* (2010-2020) actions. Launching this initiative, the Chinese Government was already stressing the need to carry out a deep reorganization of the entire educative system. This teacher education plan anticipated a comprehensive reform which aimed to cover initial teacher education, continuing training and as ordinary school curriculum. For instance, an improvement in the school curricula was launched one year later, the abovementioned *Compulsory Education Curriculum Standards* (MOE, 2011a) and two years later, in 2013, the *National Curricular Plan* was published (MOE, 2013d).

In order to endorse this initiative, it incorporated two "demonstration projects": the two annexes, E*xemplary Schoolteachers' Training Programme* and *Centre and West Rural Teachers Training Programme*. These plans were the starting point and guide to further develop a nationwide teacher education workshop. Both proposals were later revised by the Ministry of Education, who issued a notice on the implementation in 2011 (MOE, 2011f and 2011g).

The initiatives intended to promote a reform in teacher education and to integrate knowledge from new and experience teachers. For instance, the *Exemplary Schoolteachers' Training Programme* offered a learning experience from highly-skilled teachers, through national training, research and guidance to improve teaching abilities. Applicants were mainly early childhood education, primary and secondary school teachers. Other programmes addressed the needs of primary and secondary schools' principals and teacher's short-period education due to shortage of teachers in some regions.

Workshops tackled current and practical issues discussed through in-depth debates and teaching experience exchange. Activities focused on the exploration of education and teaching legislation and the promotion of strategies on teaching ability and training aptitudes. The modalities were face-to-face workshops and distance training.

Concurrently the *Centre and West Rural Teachers Training Programme* endorses full-time teacher education, short-term intensive teacher education and large-scale teacher education for teachers in remote and rural areas. One of the initiatives is to replace rural teachers with teachers-to-be students from urban areas who are already in their last year of education. The internships last at least three months, and aim to promote two innovative dynamics, the 'shadow teacher' (影子教师)[65] combination and the 'double mentoring' (双导师制)[66] strategy, along high-quality primary and secondary schools and training institutions.

Besides the general guidelines of the two training programmes, the Plan establishes some measures for its implementation, which already show a change in education philosophy. Training programmes should be well-planned, well-organized, and innovative. Students who wish to participate in the training are carefully selected, which in turn, ensures quality.

As a consequence of the *National Education Plan for Primary and Secondary School Teachers* (MOE, 2010b), the Ministry of Education published a document (MOE, 2012a), to determine concise guidelines for the teacher education dynamics included in the National Education Plan.

New teacher regulations and plans, regarding both initial and continuous education, aim to demarcate new requirements for teachers, raise teacher education quality, mainly in rural areas, and improve teacher education for both primary and secondary teachers, promoting a national balanced development in all regions and through every level of education. Nowadays the Chinese authorities are targeting innovative teacher education models and methods and including them in official documents. New national instructions aim to be a guide for all, regional and local administrations, to design their own programmes. The Chinese

[65] Shadow teacher refers to teaching practices in which the student directly participates in a teaching context but is not the main person responsible (Wenhua, 2011).

[66] Double mentoring refers to the dynamic where a student is mentored by two teachers, one from the school where they are doing their practices and another from outside the school (usually from the teaching programme or university) (Wenhua, 2011).

Government is also implementing policies which promote large-scale primary and secondary school teacher education nationwide.

In addition to the official efforts to detect which teacher education model would be most effective in China, several research groups are engaged in teacher education research. For example, according to Gu and Wu (2014), a research group of Beijing Normal University is studying teacher education programme development for both initial and continuous teacher education, a joint team at Zhejiang University and Zhejiang Normal University is investigating a model of teacher development through a teaching-learning community of practice and a group at Hainan Normal University is focusing on curriculum reform in language teachers' initial education.

Ultimately, it seems that the Chinese Government has chosen a slow but progressive and stable way to adapt their educative system. Modifications are prepared for regulations and schools, trying to deal with international exchanges and national needs. The key, a combination of both sets of philosophies which allows the avoidance of the flaws of both Chinese and western methodologies, seems to be taking place. Most authors agree about this path being the best for internationalizing China's education system while keeping and respecting its ancestral traditions (You and Jia, 2008, and Xu and Connelly, 2009, cited in Powell, 2014; Kettula et al., 2013).

China is now transforming its teacher education system to further strengthen the professionalism of teachers and their institutions, reforming contents, teaching methodologies, switching the programmes' focus from a disciplinary orientation to a professional orientation, and improving teachers' professional skills and training, as a way to raise teachers' social status and professional image (National Institute of Education Sciences, 2015). The next sections tackle each of these components in an attempt to understand current secondary teachers' initial education in China. Due to the current ongoing transformation, the given information tries to address wide-ranging features and to offer some examples of dissimilarities so as to reach a general and current overview.

5.1.3. SECONDARY TEACHERS' EDUCATION LEGISLATION AND REGULATIONS

Despite the differences among regions and even institutions, the product of their autonomy when designing teacher education programmes, secondary teachers' education is

nationally planned and guided by the *National Curriculum Standards for Teacher Education (Trial),* released in 2012 (MOE, 2012b). This document proposes to harmonize national systems of teacher education, principally focusing on initial education, but it also offers some guidelines for professional development. It belongs to a broad strategy to promote teaching quality, which also includes the *Professional Standards for Early Childhood Education, Primary and Secondary Teachers* designed by the Chinese Ministry of Education one year before, in 2011, and released in 2012 (MOE, 2012c).

The National curriculum standards for teacher education were drafted by East China Normal University (ECNU), and tackle national and formal teacher education. The initiative to develop this framework started in October 2011, and was later promulgated with specific annexes in February 2012. This document was another step to keep reforming the teacher education system in a comprehensive manner. It aims to standardize and guide the teacher education curriculum for early childhood education, primary and secondary teachers. It provides a framework, with a curricular proposal, objectives, course structures and credits, for initial teacher education and continuous education. It sets elementary requirements for the teacher education curriculum as a basis to further create and delimit teacher education materials, evaluation systems and qualifications.

There are three foundations of this report: student-orientation and values in education, practical orientation and lifelong learning. The first point conceives teacher education as a way to promote primary and secondary students' professional and personal development; core values highlighted in this statement are socialist values, social responsibility, practical abilities and innovation from new research and for new social requirements. The role and importance of students, teachers and education is stressed as one of several responsibilities of teachers which can be tackled through the teacher education curriculum. Besides subject knowledge, teachers have to obtain education and training to learn or improve their teaching abilities, to have rich professional experiences, and to plan individualized guides for their future profession.

The second point, practical orientation, stresses the fact that teachers should base their profession on reflective practice as the way to achieve satisfactory professional development. The study of their own practice, the analysis of their own experiences and learning through understanding about their context will lead to the active construction of knowledge and improvement of teaching styles, practical skills and innovation.

The last foundation, lifelong learning, emphasizes teachers as lifelong learners, thus the teacher education system should integrate initial and continuous education. It should give teachers the opportunity to adapt their techniques to new societies, to establish their professional ideas and update their knowledge.

These new standards for teacher education were designed to be established according to suggestions included in the report, such as the need to be assessed and supervised by the education administration of each region or the fact that the in-service education curriculum should reflect advances in related research fields. Teachers' curriculum is further detailed by administration and institutions, according to their early childhood education, primary and secondary curricula. It also includes basic scientific research courses, and a fair balance between subject classes and teacher education programmes. The documents suggest establishing a self-assessment system to help institutions identify their difficulties, analyse their experiences and constantly improve their curricula. Practicum, or professional practice, is also tackled in this proposal, stressing the need to improve practical course management and adapt time and courses to ensure quality.

All of the initiatives to reform general education as well as teacher education have as main framework the, abovementioned *Professional Standards for Early Childhood Education, Primary and Secondary Teachers* (MOE, 2012c). This regulation is designed according to the Teachers Law and Compulsory Education Law to promote high-quality secondary school teachers' training, ethics, professional requirements, teachers' development, rigorous and effective access to the profession, and evaluation.

According to this regulation, teachers' professional standards should be built and grow along four central ideas: (1) student-centred, fully developing secondary students' personalities in the physical and emotional areas; (2) ethics, practising socialist values and showing professional ethics (responsible, caring, patient, self-esteem, self-discipline, charisma), love for secondary education and their students, showing respect for their personalities and endorsing healthy examples as mentors; (3) basic competencies, subject knowledge, pedagogy and didactics, practical teaching ability, reflection, etc.; and (4) lifelong learning, optimizing knowledge experiences, learning new theories and practices in order to maintain sustainable development.

In September 2012, the Ministry of Education, the National Commission for Development and Reforms and the Ministry of Finance, released a note (Ministry of

Education of the People's Republic of China and the National Commission for Development and Reform and the Ministry of Finance, 2012a) to make the last reform concrete. In the announcement, the administration gave eight observations to be followed, as a way to implement the *Long-term Education Plan* (2010-2020), improving the quality of the teacher education system and content. The eight suggestions were:

1. Build a flexible system of teacher education: give more emphasis to normal universities and teachers' colleges as main teacher education institutions. Support distance education, promote integration between teacher education institutions, teaching and research, improve a teacher development platform, and strengthen early childhood education, special education teachers and ethnic bilingual teacher education, among other comprehensive initiatives.

2. Improve teacher education standards: to adapt teacher education standards to their level, improving teachers' professionalization. Implementation of teacher education curriculum standards, professional qualification standards and teacher education institutions' quality standards and standards for quality assessments.

3. Improve the teachers' education system: to determine primary and secondary teachers' enrolment system, to expand the number of Master's and Doctoral programmes, to explore and improve the establishment of vocational schools, to expand the *Normal Free Teacher Education* policy (some universities offer free education to high-level students who decide to enrol in a teacher education programme, as a way of raising teacher education quality and selecting the best candidates as future teachers), or to continue the implementation of the *Teacher Education Innovation Platform Programme*.

   The teacher education system shall be designed in 5-year degrees, with credits which serve to register teacher education qualifications, to guide assessment and to determine the requisites to earn and issue a teaching diploma. Teacher education programmes will have no fewer than 360 class hours (for full teachers' programmes) of subjects related to teacher education. The implementation of teacher education vocational schools, where every two years there would be at least two months of real practice, is also encouraged.

4. Promotion of innovative education models: support cooperation between normal universities, research institutes, enterprises, local governments and foreign education and research institutions, establishing the Teacher Education Collaborative Innovation Centre. Promote integration between teacher education and research. Encourage qualified teachers to carry out overseas training. Endorse the "4+2" path to educate general primary and early childhood education teachers. Adapt teaching and learning methodologies, integrating new methodologies, the use of ICT and the promotion of teachers' self-learning.

5. Reform teacher education curriculum: optimize curriculum structure. For primary and secondary teachers, implement a practicum period of at least one semester. Promote small classes, strengthen ethics and knowledge development, and train social responsibility and innovative spirit. Create a sharing platform of teaching resources, to promote participatory and situational discussion to improve teacher education.

6. Strengthen teacher education teaching staff: at least 20% of the staff teaching teacher education courses should be outstanding school teachers. Hire part-time outstanding primary and secondary teachers to strengthen teacher education institutions and promote full-time teacher education programmes.

7. Quality assessment of teacher education: assess normal universities and colleges; evaluate professional qualifications and establish self-assessment system for teacher education institutions.

8. Reinforce and guarantee teacher education funding: increase teacher education financial support.

Other regional orders or notices have effects and consequences on the initial education of secondary teachers, all of them framed in the China's *National Plan for Medium and Long-term Education Reform and Development* (2010-2020), which is improving every aspect of teacher education. The enhancement of teacher education regulation aims to comply with the requirements of modern times and social development, to achieve integration between today's world and teachers' professional development. Legislation, orders and national and regional notices are frequently reviewed and renewed, since as stated by Guo (2005), Chinese teacher education is facing a major historical change.

5.1.4. SECONDARY TEACHERS' EDUCATION INSTITUTIONS AND PATHS

Traditionally, teachers of primary and secondary education have been educated at two types of institution at three levels: 4-year initial teacher education at college level, 2- to 3-year junior college and at the secondary level of teacher education institutes (equivalent to vocational training after finishing junior secondary education). Initial teacher education was usually offered in full-time degrees. Nowadays, after the teacher education reforms, most teacher education programmes last 4 years and take place in higher education institutions (Guo, 2002, cited in Song, 2008b).

However, as explained in the last section, due to rather generic national regulations and the fact that China's teacher education is undergoing a deep and fast transition, the Chinese model of teacher education can show deep differences among regions. Still, various studies have detected general models among most provinces and institutions. Usually, teacher education is carried out at tertiary level, where both concurrent and consecutive models can be found. According to Wang Y.M. (2011), a 4-year Bachelor's degree, along with the Certificate of Teacher Education is the most common path to becoming a teacher for both junior and senior secondary education.

Despite the similarity in the length, there are as many paths and curriculum arrangements as there are institutions of teacher education. According to an article published by Hubei Normal University (n.d.), there are three main paths to acquire a teaching degree. The first model is the traditional style of most normal universities, with 4-year programmes which concurrently include subject classes and education/pedagogy subjects. There is a second type, similar to the traditional model which is also a 4-year concurrent model, called 'double degree in teacher education'. In this system, each university designs its programmes in a comprehensive way, curriculum and standards focused on both the concrete subject and teaching, and some classes are also focused on learning how to teach a specific subject. At the end of the programme, students obtain two degrees.

The third path, the '4+X' model, is consecutive, and is, in turn, divided into three types. (1) '4+0', where all regular classes are subject knowledge classes and students take their holidays in the third period (semester) to study educational subjects; (2) '4+1', where after doing a regular undergraduate degree in a specific subject, students add another year exclusively for teaching education classes, and (3) '4+2', where the pedagogical learning and training is taken after undergraduate graduation and as a Master's degree. Yang T.P. (2012)

also argues that the most common models are '2+2' and '3+1', but stresses the existence of '2.5+1.5', '3.5+0.5' and '4+0' for undergraduate programmes, and '2.5+0.5', '2+0' and '2+1' in vocational schools.

Similar trends are detected by Yu (2013), confirming the disparity of systems as well as the flexibility of Chinese institutions. Yu found that most common models are '2+2', where the first and second academic year focus on subject knowledge and the third and fourth year on teaching skills; '2.5+1.5', where the first two and a half years are dedicated to learning subject theory and some teaching practices, and the last one and a half years focus on teaching practices and practical training; and the '3+1' model, where the first three years are dedicated to studying the specific subject and education theory, and the last year is only teaching practice.

The author furthermore stresses that there are also consecutive paths, coinciding with previous research, leading to a post-graduate diploma. In these cases, most models follow the abovementioned '4+2' scheme, where the 4-year period focuses on subject knowledge (Bachelor's degree), and the last two on teaching skills training and education (Master's of education). For example, Beijing Normal University uses this model to educate research-based teachers for secondary schools, especially key middle schools (Yu, 2013).

In addition to this variety, some institutions simultaneously offer different models and programmes as a way to promote diverse paths for entering the teaching profession. This is the case of Shaanxi Normal University which offers '2+2', '4+2', and '4+2+1' teacher education models (Li, Dang, and Zhao, 2012).

Nonetheless, the most common system in normal universities is the concurrent model and modularized model, in which each year students take subject knowledge classes and teaching/pedagogical classes. Most of the pedagogic/didactic credits are usually distributed in the last two years of the degree, as in Hainan Normal University or East China Normal University. According to Yang T.P. (2012), good examples are Beijing Normal University which offers a '4+2' model or Shanghai Normal University with a '3+3' structure.

Because of this disparity, there are some considerations that should be taken into account when analysing teacher education in China. First, it is necessary to specify in which geographical location this education is taking place, since national regulations are complemented by the regional authorities. Second, it is important to analyse the programme

and level, as well as the type of institution. Nowadays, teacher education is mainly offered in normal and comprehensive universities. Still, some programmes can be found in junior colleges and normal schools, equivalent to vocational training levels and institutions. Normal and comprehensive universities have all levels of teacher education programmes (including secondary teachers' education), while vocational institutes generally focus on teacher education programmes for early childhood education or primary education.

Third, it is essential to consider that in China it is possible to obtain a teaching qualification through an alternative path. Students holding a different degree can take an examination to earn a teaching qualification. According to Yu (2013), this examination is organized by local authorities.

It is important to highlight the significant effort made by the Chinese Government to establish public higher education institutions. In China, in 2013, out of the 2,491 regular higher education organizations, 717 were funded by non-governmental institutions or companies (National Bureau of Statistics of China, 2014), which only represents 28.8% of the educative offer at that level. This percentage is only 0.4 points higher than in 2009 (28.4% or 656 private institutions out of 2,305) (National Bureau of Statistics of China, 2010). Owing to this variation in programmes, it is complex to determine with exactitude the number of each institutions offering secondary teachers' education.

There are six universities directly under the administration of the Ministry of Education (out of which five are normal universities): Beijing Normal University, East China Normal University (Shanghai), Northeast China Normal University (Changchun, Jilin province), Central China Normal University (Wuhan, capital of Hubei Province), Southwest University (Chongqing) and Shaanxi Normal University (Xian, Shaanxi province). Besides these six key universities, there are over 30 normal universities under the administration of local provincial authorities. Still, many students choose to enrol in junior colleges or normal schools (2- to 4-year degrees) rather than universities or normal universities (Song, 2008a). However, this is not always a voluntary choice: the costs, the length or the low possibility of being accepted in a comprehensive or normal university, due to high competitiveness, are sometimes the reasons for choosing these institutions.

Secondary teachers' education systems frequently encourage and even require future teachers to be registered in a subject department (mathematics, chemistry, physics, language). Generally, the faculty of education sends teachers to these departments to teach educational

courses, mainly related to the foundation and general knowledge of education, while teaching methods related to the specific subject are taught by members of the subject department, not from the faculty of education (Zhou, Zhang, and Li, 2011).

In turn, subject faculties or departments can enrol students majoring in subject teacher education in normal universities. In normal universities, it is common for students to be enrolled by discipline category, and to not need to choose their specific major until the end of the second or third year. Sometimes normal universities offer teaching and non-teaching degrees in the same subjects. If the university offers a first period of general subject knowledge, the selection of a subject-teaching major or a non-teaching major is made according to a comprehensive ranking including students' personal will and their academic achievements (Yu, 2013).

China also offers certain degrees through distance-learning education, the responsible body for which is the China Television Teachers College (CTVTC), and Web-based universities. This type of learning platform is principally used to prepare teachers in remote and rural areas, as well as for in-service education.

While paths and programmes are not homogeneous, the Chinese Government has recently tried to harmonize all of the rich diversity of Chinese features in standard but flexible programmes and proposals. The next section focuses on the core elements of teacher education in terms of curriculum and contents, as one of the main concerns of educative administrations.

5.1.5. DESIGN AND ORGANIZATION OF SECONDARY TEACHERS' EDUCATION CURRICULUM

Most teacher education institutions distribute their credits into three categories: general education/comprehensive training courses, subject knowledge/academic area courses and educational/pedagogical subject courses related to pedagogy, psychology, and students' specific academic area, including teaching didactics and methodology. Usually, according to Li (2002, cited in Guo 2005; Song, 2008b), general education courses represent approximately 21% of the curriculum, subject knowledge takes almost 72% of the credits and educational-subject courses only sum up 7% of the teaching time. Han, (2012, cited in Li, L., 2014), makes a more optimistic estimation, although noticing a clear preference for

subject classes, affirming that 60% to 70% of the total credit hours are planned on subject matter.

This affirmation corresponds with those made by many academics studying different universities and teacher education institutions. Curricula frameworks of teacher education in China clearly overemphasize subject knowledge rather than pedagogical knowledge, (Guo, 2005; Yu, 2013), and most classes are common compulsory classes (30.4%) and compulsory professional courses (49%), while a few (20.6%) are elective (Central China Normal University, 1992, cited in Guo, 2005). These dynamics can lead to isolation of social and development needs as well as students' individuality (Xu and Connelly, 2009, cited in Powell, 2014). These are some of the reasons why the Ministry of Education published in 2011, and later made concrete in 2012, an attempt to regulate and widen teacher education curriculum standards. The Ministry of Education launched the first national framework to develop teachers' initial education, which according to Han (2012, cited in Li, L., 2014), increased pedagogical education from 6% to around 10%.

The already mentioned *National Curriculum Standards for Teacher Education* (MOE, 2012b) determine that the secondary school teacher education curriculum should have as an objective to understand the multifaceted characteristics of adolescents, their learning approaches, cognitive, personality and cultural features, as a way to guide them safely to independent thinking, create a safe and comfortable learning environment and promote subject learning, social relationships, self-awareness and respect. The guidelines for further developing the curriculum are quite general; however, this document deeply details the objectives of teacher education for each level. Objectives and basic requirements are organized in three areas. The secondary teacher education objectives are shown in Tables 5.1 to 5.3.

Table 5.1: Secondary teacher education curricular basis. Area: Beliefs and responsibilities

Objectives	Basic requirements
Teachers' view and behaviours towards the students	- Understand students' development in this level. Recognize the significance of the school in promoting their development. - Respect and protect the students' rights, learning process, development, autonomy and independence. - Respect individual differences, believe in students' potential, and be willing to create development conditions and opportunities for students.
Teachers values and behaviour	- Understand the role of teachers as facilitators of learning. Be willing to create conditions where teachers help their students to grow through self-development. - Understand secondary school teachers' professional characteristics and requirements, and improve their knowledge and practice through lifelong learning. - Understand the rights and responsibilities of teachers and teachers' professional ethics.
Education philosophy (ideas) and behaviour	- Understand the importance of students' educational development, teachers' professional development and social progress. Engage educational activity happily believing in education as a creative work. - Understand the history, current situation and development trends of human education. Be able to recognize quality education and to understand and participate in educational reform. - Have a positive view, thinking and professional judgement about education quality and school as an education-related phenomenon.

Source: Ministry of Education of the People's Republic of China (2012b)

Table 5.2: Secondary teacher education curricular basis. Area: Educational knowledge and competencies

Objectives	Basic requirements
Understanding students' knowledge and skills	- Understand the main theories of child development and the latest research results. - Understand the general factors influencing secondary school students' physical and mental development characteristics and individual differences. - Understand secondary students' cognitive development, learning characteristics and influencing factors. - Understand secondary students' process of acquiring moral character and habits, as well as the impact of peer interaction on their development. - Understand students' learning and development. Master observation, conversation, listening, analysis and other methods of work and skills. - Understand Chinese education policies and regulations; be familiar with the content on children's rights and ways to safeguard the legitimate rights and interests of children.
Students' knowledge and ability	- Understand and know secondary education objectives, subject curriculum standards and teaching goals. - Be familiar with the content and methods of teaching, design educational activities, promote the creation of students' learning in the classroom environment. - Understand the theory and techniques of classroom assessment, learning through evaluation to improve teaching and promote student learning. - Knowledge of curriculum development activities, learn to develop school-based curriculum design and guidance in extracurricular school activities. - Understand the basic methods of classroom management; teaching students to learn self-management and the formation of collective spirit. - Understand the basics of students' mental and emotional health

	education; learn to deal with common adolescent psychological and behavioural problems. - Master skills in language, communication and cooperation, and the use of modern educational technology.
Development of self-knowledge and abilities	- Understand the meaning of teachers' professional quality and focus on their own professional development. - Understand teachers' professional development stages and process, general method of planning, learn to understand and share professional growth based on outstanding teachers' experiences. - Understand the factors influencing teachers' professional development; learn to use a variety of curriculum-based learning opportunities.

Source: Ministry of Education of the People's Republic of China (2012b)

Table 5.3: Secondary teacher education curricular basis. Area: Educational practice and experience

Objectives	Basic requirements
Observation of educational practice	- Observe secondary school classes to understand and process teaching experience and different teaching styles. - Understand the content and requirements of secondary school class management and obtain direct contact with the student experience. - Understand secondary school organizational structure and operating mechanisms.
Practical experience in education	- Learn design and implementation of education programmes depending on the characteristics of students, and under expert teachers' guidance. - Under guidance, participation in supervised learning, classroom management and organizational activities; gain experience with family and communities. - Participate in various research activities, access to direct dialogue with other teachers.

Research experience and experience in educational practice	- Reflection on everyday classroom and learning, problem awareness and problem-solving skills. - Understand the general methods of research, experience and learn to plan, carry out activities to complete the report and share the results of the process. - Participate in all types of research activity, access to scientific research and practice in their own research experience.

Source: Ministry of Education of the People's Republic of China (2012b)

These standards are to be framed in a concrete programme, according to university resources, philosophy and context. The curricular plans should be understood taking into account that Chinese education system for secondary school teachers is often designed as a concurrent model, especially in normal universities; therefore, the credits describing teacher education programmes refer to specific teacher education, not including subject knowledge classes. This legislation, alongside the fact that most normal universities offer 4-year undergraduate programmes for teacher education, supports the decision to mainly focus the research on concurrent models, as promoted by Chinese authorities.

The proposals for 3-year vocational programmes and 4-year undergraduate degrees in teacher education are made in terms of credits. Each credit means 18 class hours and they are earned only after passing the examination. There are five learning areas (child development and learning, secondary education foundations, secondary education disciplines and activities guide, mental health and moral education, and ethics and professional development), and the practicum. All areas are compulsory for every student; however, the document only provides a recommendation about the modules institutions should offer. The institution will later decide what classes are compulsory or elective. The general proposal is as shown in Table 5.4.

Table 5.4: Secondary teacher education curriculum. General plan

Learning area	**Suggested modules**	**Credits**	
		3-year vocational/ specialist programmes	4-year undergraduate degrees
1. Child development and learning	Child development; students' cognitive and learning development.	Minimum compulsory credits: 8 Credits	Minimum compulsory credits: 10 Credits
2. Secondary education foundations	Curriculum design and evaluation; effective teaching; philosophy of education; school education development; classroom management.		
3. Secondary education disciplines and activities guide	Secondary school curriculum standards and textbook research; teaching design; comprehensive practice activities.		
4. Mental health and moral education	Students' psychological counselling; students' moral development and moral education.		
5. Ethics and professional development	Teachers' professional ethics; teachers' professional development; education research methods; applications of modern technology to education.		
6. Educational practice	Education experimentation; educational practice.	18 weeks	18 weeks
Minimum credits in teacher education curriculum (including elective courses)		12 credits +18 weeks	14 credits +18 weeks

Source: Ministry of Education of the People's Republic of China (2012b)

As established by the Teachers' Law (1993), the minimum certification for junior secondary school must last at least two to three years, and for senior secondary school at least four years, hence the programme of vocational education would only be accepted for

junior secondary school teachers. However, as maintained in Section 5.1.4 on institutions and paths, most junior secondary school teachers are also prepared at undergraduate level in longer plans.

The establishment of these general and national guidelines for teacher education was afterwards included into a concurrent model, later adapted by each university to their own necessities. Most of the universities plan their undergraduate degrees to have between 150 and 170 credits (Li, L. 2014), hence the modern model encourages universities to organize their programmes including, at least, 14% to 16% of pedagogical education.

This process involves further differences in the complete programme, but shows the new tendencies in initial teacher education. For example, 4-year teacher education programmes in Hainan Normal University strictly follow this policy, designing 10 compulsory credits and 2 elective credits for pedagogy classes. It gives great importance to teaching education, with 14 credits, and 16 credits for other practices (also related to teaching practices). The complete proposal is as follows:

Table 5.5: Hainan Normal University teacher education curriculum

Curricular category			**Credits**	**Total**
General Education	Compulsory		46	52 (33%)
	Elective		6	
Subject knowledge	Discipline/subject-basic curriculum (compulsory)		58	78 (49%)
	Subject core curriculum (compulsory)		12	
	Subject orientated & curriculum development (elective)		8	
Pedagogy & teaching training	Teacher education (compulsory)		10	28 (18%)
	Teacher education (elective)		2	
	Teaching practice (compulsory)	Teaching training	14	
		Other practice	16	
Total credits				158

Source: Yu (2013)

On the other hand, Zhejiang Normal University gives the same relevance to teaching practices (14 credits) but more importance than other normal universities to pedagogy (40 credits). Teaching practice lasts 9 weeks and teaching research 3 weeks. The complete programme is as follows:

Table 5.6: Zhejiang Normal University teacher education curriculum

Curricular category			Credits	Total
General Education	Obligatory		43-52	49-64 (27-29%)
	Elective		6-12	
Subject knowledge	Discipline basic curriculum Subject core curriculum		35-50	79-106 (44-48%)
	Subject orientated & development curriculum		≥30	
	Practices	Graduation dissertation design	6-10	
		Major practice	4-12	
		Social practice of political theory	2	
		Military theory & military training	2	
Pedagogy & teaching training	Educational theory and psychology		19	52 (23-29%)
	Educational administration & educational research		11	
	Teaching skills and methods		10	
	Teaching practice		14	
Total credits				180-222

Source: Yu (2013)

Still, not every concentration in each university has the same distribution. For instance, the credits for teacher education classes in East China Normal University, analysing teacher specialities in academic year 2014/2015 for physics, foreign language (English) and mathematics, ranges from 19% to 22% of the total plan. The table below shows the general scheme of the three undergraduate degrees.

All three programmes are designed with 155 credits, out of which students are encouraged to take 20 to 27 elective credits between the first and second year and, and 14 to 24 between the third and fourth year. Out of the elective credits, four have to be chosen from the comprehensive teaching set and two from the general education core curriculum. The maximum time to finish the degree is six years.

General education courses include ICT, English language, politics, physical training and traditional culture heritage. These subjects are common to all undergraduate degrees, but the weight of each class is decided by each faculty. Subject-basic courses are considered the basic level of knowledge to further deepen in the concentration, while subject-teaching foundation courses are the basis for teaching knowledge (sometimes both modules are included in the same category as 'basic courses', and later differentiate into the two types). Subject

professional knowledge is exclusively related to the concentration and teacher education courses to the specialization of teaching.

Table 5.7: East China Normal University undergraduate programmes (teacher concentration) in physics, mathematics and foreign language

Modules	Physics	Foreign language (English)	Mathematics
General education courses	51 credits (33%)	40 credits (26%)	51 credits (33%)
Subject-basic (foundation) courses	23 credits (15%)	2 credits (1%)	
Subject professional (physics, English or mathematics) courses	47 credits (30%)	84 credits (54%)	73 credits (47%)
Subject-teaching foundation courses	10 credits (6.5%)	8 credits (5%) (Originally included in subject-basic courses)	14 credits (9%) (Originally included in subject-basic courses)
Teacher education courses	24 credits (15.5%) Of which 6 for Practicum (4%)	21 credits (13.5%) Of which 6 for Practicum (4%)	17 credits (11%) Of which 6 for Practicum (4%)
Total credits teacher education	34 (22%)	26 (19%)	31 (20%)
Total credits	**155**	**155**	**155**

Source: Researcher's original compilation from East China Normal University (2014a, 2014b, 2014c)

The Chinese Government and institutions have lately focused on designing effective practicums for their students. For instance, in 2012, as one of the strategies of the *Long-term Education Reform and Development Plan* (2010-2020), the Ministry of Education, the Central Propaganda Department, the Department of Finance and Department of Culture, alongside another five departments, issued a notice to improve the practicum (MOE and National Commission for Development and Reform and the Ministry of Finance, 2012b).

In it, the Chinese administration stressed the need to strengthen teaching practices, encouraging colleges and universities to formulate teaching practicum standards and increasing the proportion of teaching practice. However, other details regarding partnerships among universities and schools have not been nationally harmonized, since legislation is

rather vague tackling particular facts on practices, mentors' responsibilities or advantages and update courses for mentors.

It states that at least 15% of the credits of undergraduate degrees in humanities and social sciences shall be dedicated to practice, which rises to 25% in engineering, agriculture and health sciences majors and to 50% in higher vocational programmes. Students on normal (teacher education) undergraduate degrees should have at least one semester of practicum, and students at Master's level, at least six months. As a result, some universities, such as East China Normal University, have established two types of practicums, observation and active internships. Observation practices usually take place, according to the programme designed by each faculty, during the second and third year. Faculties place the active internship in the first semester of the last year.

The Ministry of Education highlights the importance of an effective practicum to learn from practice, learn teaching management strategies, improve students' experience and promote innovation. One of the requirements is to present a graduation final thesis. Other practices no related to teaching stressed by the Ministry of Education are the military training, which should take two to three weeks (no less than 14 days).

5.1.6. SECONDARY TEACHERS' PROFESSIONAL COMPETENCIES

The notion of 'competencies' is not used in Chinese educative policies as it is understood in the European Union. However, assuming that competencies include a combination of knowledge, skills and attitudes as a key towards professional development and lifelong learning, Chinese policies may be using dissimilar nomenclature to refer to analogous or similar concepts. Chinese educative policies often refer to terms such as competency or ability (能力), knowledge (知识), professional competence (专业能力), attitudes and behaviours towards education (教育教学的态度与行为), professional standards (专业标准) or professional skills (专业技能).

Due to the different nomenclature, and after analysing several Chinese documents, this section takes as a reference what Chinese educative policies refer to as "professional standards" (专业标准). This term is used to describe desirable milestones for the teaching profession. In the Chinese literature, the term 'standards' makes allusion to the requirements all teachers should get to develop good teaching practices. However, these standards go beyond specific knowledge and abilities in different disciplines or subjects. They are the

general common requirements for all secondary school teachers, and the basis of teaching and teachers' professional development in a comprehensive manner. The Chinese use of these terms is very like the European idea of key competencies, which is even more noticeable when analysing and itemizing the concept used in official documents. For instance, in the core document related to "teachers' professional standards", used as orientation for teacher education institutions, the desirable "professional standards" are divided into professional philosophy and ethics (what teachers think/attitudes), professional knowledge (what teachers know/knowledge) and professional competence (what teachers do/skills). The European document is also organized around these three components: attitudes, knowledge, and skills.

This classification is not new for Chinese educative policies. In addition to documents developing general professional competencies for teachers, the Chinese government has already focused on specific competencies as the use of ICTS by teachers and schools. That is the reason why, in 2004, the Ministry of Education published *Technology Competency Standards for Teacher Education* (MOE, 2004c). At that time, its proposals were made classifying the objectives and contents in attitudes, knowledge and skills, innovation and social responsibility.

As well as the specific orders, teachers' general education regulation includes several references to teachers' professional competencies. For instance, the *Teachers' Qualification Regulation* (MOE, 1995b), besides establishing the national basis for teacher's qualifications, makes an explicit bond between State responsibility to develop competencies in teacher education and the process of obtaining a teaching certificate. It links teachers' qualifications to teachers' competencies (Article 6), and refers to the Law of Teachers (Article 10, Paragraph 2) where "education and teaching competencies" are the responsibility of the State. It later states that examination to obtain a teaching certificate should include an assessment of professional teaching competencies.

The *National Curriculum Standards for Teacher Education* (MOE, 2012b) also highly stress the need to focus on competencies. Competencies are named in the introductory general articles of the document, emphasizing that the teacher education curriculum should work towards educational essential knowledge, teaching competence, social responsibility (Article 1) and practical competencies (Article 2). It highlights the need to enhance teachers' adaptability, openness, reflection and flexibility (the competence to meet the challenges presented by

education), giving teachers the correct professional ideals and the input and possibilities to master knowledge and skills (Article 3).

Regulation regarding professional desirable features was further detailed and implemented in 2012 (MOE, 2012c), through three annexes describing the professional standards and requirements at each of the levels: *Professional Standards for Kindergarten Teachers (Trial), Professional Standards for Primary School Teachers (Trial)* and *Professional Standards for Secondary School Teachers (Trial).* According to the document related to secondary education, these principles aim to become basic professional requirements, to implement basic norms in secondary school teachers' behaviour, to improve high-quality middle school teachers and to help teachers to achieve real professional development. The standards, note the documents, are also used as a basis for designing teacher education, training, and access to the profession, teaching assessment and other basic work procedures.

For secondary education, the Ministry of Education set four basic notions, which are categorized later in the same document. The first basic notion refers to ethics. Teachers must love senior education and have career aspirations with a socialist core value system. They should care for their students, respect them, and be responsible and patient, among others. They should have and teach, self-esteem and self-discipline, and be a good mentor to help students to reach healthy growth.

The second idea is called student-centred, and focuses on teachers' knowledge about the physical and mental development characteristics of students in secondary education and the design of educational activities according to Chinese legislation and to the students' characteristics. The main objective is to promote the healthy, happy and full development of a student's personality.

The third basic principle is the ability to focus on the main subjects. This combines subject knowledge, educational theory and practice, and constant improvement of professional competency. With the fourth basic notion, lifelong learning, the Chinese Government encourages teachers to learn advanced secondary education theories and practices at home and abroad to understand the experience of secondary education reform and development; the MOE aims to optimize the structure of knowledge, improve literacy, and develop a sustainable system that makes lifelong learning a national and general model.

As in the European document, the structure of teachers' competencies is divided into three categories, from the less concrete to the more specific. According to Xie (2012), this organization is called "three dimensions, fourteen areas, sixty-one basic requirements" (三个维度, 十四个领域、六十一项基本要求).

The first dimension, "Professional philosophy and morality or ethics", is associated with teaching philosophy and values, relationship with and management of students, teaching and management to their own development, etc. The basic requirements are being qualified as a teacher, having good professional ethics and professionalism.

The second, "Professional knowledge and expertise", refers to teaching and understanding of practical subjects, physical and mental development according to secondary education level and the combination of academic knowledge and pedagogical practices. It also assures that teachers design their syllabuses and activities according to the comprehensive growth of the students.

All of the dimensions are interrelated, especially the third one, "Teacher competencies", which includes teaching abilities, personal capabilities and personal growth according to teachers' professional work. Therefore, teachers' professional competencies involve being able to plan and design a syllabus, the implementation and evaluation of their programme, classroom management, design of complementary activities, interpersonal skills, communication strategies and ability to cooperate with students, parents, colleagues, or any member of the teaching community, and lifelong learning, as well as improving teaching methodology through self-development.

In the *Professional Standards for Secondary Education Teachers* (MOE, 2012c) competencies are tackled in specific programmes for each level, as well as in the general framework of the document. In this initiative, professional competencies are linked to subject knowledge, educational theory, research, practice and reflection (Article 3) and to the concept of lifelong learning (Article 4). Professional standards for secondary teachers are presented in Tables 5.8 to 5.10.

Table 5.8: Professional standards (competencies) for secondary teachers. Professional philosophy and ethics (attitudes)

Competency Sub-category (areas)	**Basic requirements**
Career Understanding	Knowledge, understanding and implementation of: 1. Party and State education policies, laws and regulations. 2. Significance and love of secondary education. Career aspirations and professionalism. 3. Teacher's professional identity and uniqueness. 4. Professional ethics, serving as role models. 5. Team spirit, active collaboration and exchange.
Attitudes and behaviours: towards students	Caring, respect and/or trust 6. School students (physical and mental health) 7. Students' independent personality, rights and interests, equal treatment (No irony, sarcasm, discrimination, corporal punishment) 8. Individual differences. Understand diverse needs. 9. School students, create conditions to promote self-development.
Attitudes and behaviour: Education and Teaching	10. Objectives: People-centred education, moral education, knowledge, ability and character development. Comprehensive development. 11. Respect the laws and provide a suitable education. 12. Stimulate creativity, curiosity and learning interests. 13. Guide students to independent learning and self-reliance. Develop their ability to adapt to society. 14. Be a good guide for the Communist Youth League, the Young Pioneers organization.
Personal accomplish-ment and behaviour	15. Caring, responsibility, patient and careful. 16. Optimistic, enthusiastic, cheerful, approachable. 17. Adept at self-regulation of mood, maintain peace of mind. 18. Eager to learn, keep making progress. 19. Neatly and appropriately dressed, healthy, correct language, polite.

Source: Ministry of Education of the People's Republic of China (2012c)

Table 5.9: Professional standards (competencies) for secondary teachers. Professional knowledge and expertise (knowledge)

Competency Sub-category (area)	Basic Requirements
Educational knowledge	To know/understand: 20. Basic principles and main methods of secondary education. 21. Principles and methods of construction and management of the Young Pioneers (Communist Youth League). 22. Basic principles and methods of educational psychology, physical and mental development. 23. Secondary school world, life and values. 24. Students' process and characteristics of thinking, innovation and practice. 25. Groups and cultural characteristics and behaviour.
Subject knowledge	To know/understand: 26. Basic ideas and methods of teaching in their own branch of knowledge. 27. Content of teaching subjects, basic principles and skills. 28. Teaching of other disciplines. 29. Contact and social practice with the Communist Youth League. Teaching activities with the Young Pioneers.
Pedagogical content knowledge	To know/understand: 30. Teaching curriculum standards. 31. Methods and strategies to develop secondary curriculum and to adapt it to school-based curriculum. 32. Subject-specific content cognitive and learning characteristics of secondary students. 33. Research methods and strategies conducted for teaching and learning in specific subject content.
General education knowledge	34. Knowledge of natural sciences, humanities and social science. 35. Basic system of Chinese education. 36. Art appreciation and knowledge. 37. Adapting educational content, teaching methods and modern methods through IT knowledge.

Source: Ministry of Education of the People's Republic of China (2012c)

Table 5.10: Professional standards (competencies) for secondary teachers. Professional competence (skills)

Competency Sub-category (area)	Basic Requirements
Instructional Design	38. Design scientific objectives and teaching programmes. 39. Rational use of teaching resources and methods to design teaching process. 40. Guide and help secondary students to design a personalized learning plan.
Teaching practice	41. Create a good learning environment and atmosphere, inspire and protect students' learning interest. 42. Effective implementation of teaching through enquiry, debate and participatory methods. 43. Settle teaching process regulation and reasonably handle classroom contingencies. 44. Develop students' ability to innovate, think independently and explore. 45. Encourage students to be good Communist Youth League members of the Young Pioneers organization. Join group activities, diffuse information, etc. 46. Integrate modern education techniques applied to teaching.
Classroom management and educational activities	47. Establish a good relationship among teachers and build good peer relationships among students. 48. Combine teaching activities focusing on education. 49. Carry out activities, focusing on moral and ethics development, according to the characteristics of students' worlds, lives and values. 50. Design transversal activities according to secondary students' physical and mental development. 51. Guide psychological, academic, and other aspects of development. 52. Manage and implement Communist Youth League and Young Pioneers activities. 53. Respond to emergencies appropriately.
Education and teaching evaluation	54. Use multiple evaluation methods and tools, multiperspective and process evaluation of student development. 55. Guide students to self-evaluate. 56. Undertake self-evaluation about teaching effectiveness, time management and improving education and teaching.
Communication and cooperation	57. Understand and teach to communicate with others as equals. 58. Cooperation exchanges with colleagues, share experiences and resources, and common development.

	59. Communicate effectively with parents to promote students' development. 60. Help the senior school to establish good relations and cooperation with the community.
Reconsideration and Development	61. Collect and analyse relevant information and reflect on it to improve education and teaching. 62. Carry out research about education and teaching practical needs to solve specific problems. 63. Design a professional development plan, and actively participate in professional training.

Source: Ministry of Education of the People's Republic of China (2012c)

As Xie (2012) states, these standards are key to improve teaching quality, and are based on the essential attributes of secondary education teaching. They were designed learning from international experience, but giving full consideration to China's actual needs and situation. The creation of the national standards also aims at helping to implement the National Long-term Education Reform and Development Plan (2010-2020), and to cover new and contemporary educational requirements, dealing with tradition and modernity to reach an efficient combination.

5.1.7. SECONDARY TEACHERS' QUALIFICATIONS

As explained previously, secondary teachers for ordinary schools can accede to a teaching diploma through various institutions, mainly comprehensive universities, normal universities and teacher colleges, which offer plans with uneven lengths. Assuming that programmes can generally take between three and five years and are usually taken in higher education institutions, Chinese secondary teachers qualifications could correspond to ISCED 5 (short-cycle tertiary education, 2 to 3 years), ISCED 6 (Bachelor's degree, 3 to 4 years) or ISCED 7 (Master's degree, usually lasting 1 to 2 years).

A *Teachers' Qualification Regulation* (MOE, 1995b) was approved on 12 December 1995 by the State Council. It determines the categories, recognition and requisites for teaching qualifications. Its second chapter establishes seven kinds of qualification: (1) teachers' qualifications for early childhood education, (2) qualification for primary school teacher, (3) qualification for junior secondary school teacher, (4) qualification for senior secondary school teacher, (5) qualification for specialized/vocational/technical secondary school teacher, (6) specialized/vocational/technical internship instructor (tutor) qualifications and

(7) college/higher education institutions teacher qualification. Later modifications joined types 4 and 5 and added the category "qualification for teachers of adult education".

The *Teachers' Qualification Regulation* was, according to Yang, T.P. (2012), implemented from September 2000, emphasizing that all student teachers who graduated in a teaching major from a year before the release of the regulations, should satisfy the requirements of the teacher qualification. Further regulations have been issued since that milestone in teachers' qualification legislation, such as the *Operational Regulations on Teacher Qualification Certificate* trying to standardize and improve teacher qualification systems (Yang, T.P., 2012).

According to the general Teachers Law, teachers should obtain a teaching qualification before entering the profession. However, there are two options for becoming a fully certified teacher: having a specific teaching degree or passing a qualification examination. Chapter IV of this rule gives the Department of Education of the State Council responsibility for choosing the subjects, standards and syllabus of the State Teacher Certification Examination. However, guidelines in this law were quite general, resulting in deep differences among regions. Exams were self-organized by regions with no common proposals, materials or examination time.

Trying to harmonize the assessment and aiming to adapt the standards to contemporary needs and circumstances, the Ministry of Education published in 2013 a notification of the *Temporary Measures for the Primary and Secondary School Teachers' Qualification Test* and the *Temporary Measures on the Primary and Secondary School Teachers Qualification Periodical Registration* (MOE, 2013e). These orders established the specific guidelines for provinces and administrative departments of education to implement the national teacher qualification examination system in their territory. This project, establishing a National Teacher Certification exam, was launched in 2013, aiming to be fully implemented in all mainland provinces by November 2015.

The organization follows a vertical structure and policy. On one hand, the State is responsible for preparing the general plan, such as the written test, the questions for the interview and test management regulations; it designates responsible bodies for the evaluation of test results, assesses work organization and offers guidance and supervision to provinces, autonomous regions and municipalities. The Ministry of Education designs the examination according to professional standards and the teacher education curriculum standards, develops teachers' qualifications examination standards and organizes the syllabus

for the teacher qualification examination. Once the examination has been planned, the Teacher Qualification Examination Centre of the Ministry of Education implements the teacher qualification exam.

On the other hand, provinces, autonomous regions and municipalities establish specific regional measures to implement the lines offered by the State, and manage and supervise the execution of the test in each of the areas or district within their region.

Nowadays, national regulation endorses the teacher's qualification examination as a prerequisite for accessing the teaching profession for all citizens who want to work as teachers but do not hold the correspondent qualification (including junior and senior secondary school teachers). The assessment should focus on teaching ability, and books and materials for the content are printed by the Department of Education of the State Council. The Ministry of Education states that the assessment should be people-orientated, ability-orientated, practice-orientated and professional-orientated, including scientific knowledge, and fair, safe and standardized policies. The exams take place twice a year. Written exams are usually held in March and November and interviews and oral examinations in December and May.

The evaluation includes a theoretical part, assessing educational philosophy, ethics, laws and regulations, knowledge, science and culture, reading comprehension, language expression, class management, logical reasoning, information processing, teaching subjects, instructional design and methods of evaluation; and a practical part, where work ethic, honesty, good health, professional knowledge, analytical ability and judgement, language skills and verbal expression, basic teaching literacy and design, teaching implementation and evaluation, and teaching basic skills are examined. Junior and senior secondary teachers are tested in three matters: integrated knowledge/quality, education knowledge competence, and subject knowledge and teaching competence.

The practical test takes the form of a structured interview, with at least three members on the jury. The aspirant confronts a real situation (simulation mode). Drawing a title of a topic, the candidate should present a lesson plan with activities, answer questions about a lecture, realize a demo class, explain how to evaluate, etc. While the State fixes the minimum score in the written test, the departments of education of each of the provinces determine the score for the practical assessment. The mark of the written test is valid for two years,

while the certification (obtained only if both parts are passed) is effective for three years. If the teacher is working, certification validity is five years.

General prerequisites for taking the examination are a love of education, having a good moral character, and respecting constitutional and national legislation. The academic requisite to sit the examination for junior or secondary teachers' qualification is to hold a university degree or above. Candidates must be Chinese citizens and hold proof of residence (live, work or study in a university) to the administration where the future teacher wants to be examined. Applicants should also present a healthy medical certificate (good physical and mental qualities, no infectious diseases, no history of mental illness). Besides, candidates should show a high level of language and communication skills. Most provinces ask the applicants to hold a certificate in Chinese language (Mandarin) marked at least with a B, obtained after passing the "Mandarin Standardized Level Test" (普通话水平测试等级标准).

The administration responsible for analyse the suitability of the candidates depends on the level. Teachers for junior secondary school are handled by the department of education at county level, while the candidatures for senior secondary school teachers are examined by the city (state-level) administrative department of education.

Once teachers pass the examination, they are officially able to teach in schools according to their degrees and specialty. They then proceed to register with the regional administration to enter the profession. Registration in one province is also a requisite for students with a teaching degree.

5.1.8. SELECTION OF SECONDARY TEACHERS-TO-BE FOR INITIAL EDUCATION PROGRAMMES

Every selection system for higher education is subordinated to legislation or orders issued on at least three levels: national, regional and institutional (university or colleges). The national legislation gives each institution responsibility for their admissions system, but each year establishes a higher institutions entrance guide, published by the Ministry of Education. The national administration issues the "Higher Institutions Enrolment Guide", which includes students' academic requirements and the type and subjects to be assessed in the national entrance examination. It also gives the general administration responsibility for audit provinces (autonomous regions and municipalities), authorize the National Education

Examinations Authority (教育部考试中心) to recruit an Examination Committee, guides universities with their recruitment process and defines procedures to protect students and staff rights through a legitimate process.

Simultaneously, provinces, regions, cities, and counties collaborate to implement the provisions issued by the Ministry of Education. Regional administrations develop and adapt the system to their own reality, establish complementary regulations, supervise the implementation of the admission policies and university enrolment charters, and are responsible for registering the candidates and assessing their ideological, political and moral values, physical situation, grades, etc.

Finally, universities and colleges determine a leading group, including the principal and members of the inspection and related departments, to be responsible for their university admissions. Their main responsibilities are to implement all the issued legislation (national and regional), develop their own enrolment plan and charter, and provide information about the enrolment system.

For example, in February 2015, the *2015 Notice on Higher Institutions Enrolment* (MOE, 2015a) was released. The objectives were to reform the university entrance exam, promote equitable enrolment, reduce and standardize the entrance points, improve and standardize higher education institutions' admissions and improve the enrolment and selection system, among others. The Ministry of Education strictly focuses on rural areas' development, stressing the importance of better planning and increasing the admission rate in central and western regions, to increase the number of rural students attending key universities, or the increment of vocational colleges.

An annex of the notice directly tackles university and college selection processes and highlights that the enrolment process should guarantee fair competition, fair selection, open and transparent principles and comprehensive evaluations, including students' merits as well as ideological, political and moral assessment. Students can only access a university selection process when they comply with the Constitution and laws of the People's Republic of China, have a senior secondary school diploma, and fulfil health requirements. Students who have already obtained a high academic diploma cannot participate in this process; neither can students without the required qualification or those who have incurred any kind of law violations (including cheating in the national examination or having a criminal record).

Candidates can apply to any selection process in the province (autonomous regions or municipalities) where they reside.

The *Higher Institutions Entrance Examination Guide* (MOE, 2003b), reformed in 2010, is the main document determining health requirements. The Chinese administration does not allow people with certain diseases to apply for higher education institutions' selection process.

If the candidates fulfil all the cited requirements, students are allowed to take the National Entrance Examination (the contents and examination data are also established by the Ministry of Education) and/or to further participate in the university selection process. An admission process charter is published by each university, including university-specific characteristics (name, place, type, level), the enrolment plan, the foreign language and physical health requirements, admission rules, tuition fees, etc.

According to this order, excellent senior secondary students who have obtained certain awards (first, second and third place in the secondary school subjects' National Olympiads, the National Youth Science Creation Competition award, the International Science and Engineering Fair or international environmental research projects Olympiad award, or ranking among the best in international sport competitions) or have ranked in a very high position among secondary students (outstanding provincial student or students with excellent achievement in political, ideological and moral matters) may obtain extra points in the admission process.

All these processes and requirements directly link the National Entrance Examination to the higher education institutions' enrolment systems; however, additional clauses set out the possibility, upon official approval and respecting the general guidelines, to determine different paths to enrol with certain universities or programmes.

Generally speaking, not including Chinese citizens from other provinces who have a certain number of reserved places, students applying for arts who go through particular tests or foreigners who enrol in Chinese universities through international agreements or specific programmes, there are two main ways to get accepted to a Chinese university after finishing senior secondary school. Ordinary admission is called 'regular undergraduate enrolment', while specific enrolment processes designed by each university are called 'independent enrolment'.

On one hand, as for any other major, access to a degree related to secondary teachers' education through regular undergraduate enrolment is mainly based on the grade obtained in the Gaokao (National University Entrance Examination). Each university offers a restricted number of places according to university size, conditions, funds, degrees, fields, etc. This system is the most common among all kind of institutions, including comprehensive universities offering teaching degrees and normal universities. Following the national guidelines, in most regions, the selection is mainly based on the Gaokao score, but must also take into account other requisites according to provincial/university legislation or orders.

The grades needed to enter a specific major vary between provinces, universities and even inside the same university if places are offered to students from other regions and must be adapted to the Gaokao scores in their provinces. For example, in 2014, the average[67] scores in Beijing (maximum 750 points) were 623 for economics (83 points on a 100-point scale),[68] 638 for Chinese language (85), 635 for English language (84) and 605 for early childhood education (80.6) or 604 for art education (80.5). The same year, the general average in Shanghai (maximum of 630 points) was 610 for economics (96.8), 608 for Chinese language (96.5) and 607 for English language (96.3). In Shanghai education, the students reached the same average as in Beijing, however, because of its different graduation system, the final score is slightly higher (96 points for early childhood education and 95.8 points to enter art education).

The average score for teaching majors stayed the same in Tianjin, Chongqing, Jiangxi (all three out of 750 points) or Zhejiang (out of 810 points), but were higher in other provinces like Shandong (art education 642 out of 750, equivalent to 85.6), Guangdong (art education 621 out of 750, equivalent to 82.8) or Guizhou (early childhood education 625 out of 750, equivalent to 83.3), and lower in Jiangsu (360 for pedagogy, 365 for early childhood education and 366 for art education, equivalent to 75-76 out of 100 points).

[67] All average scores have been consulted from Sina Corporation. Further information can be consulted at: http://kaoshi.edu.sina.com.cn/college/c/10269.shtml [July 8, 2015]

[68] Since provinces mark the Gaokao scores in different scales, from 480 in Jiangsu to 810 in Zhejiang, and to better understand each of the grades on a standard scale, the digits in parentheses correspond to the equivalent score on a 100-point scale.

Focusing on two of the most important normal universities in China, as a way to narrow the sample and focus on teacher education, the 2014 average Gaokao score to enter liberal arts undergraduate programmes was 489 (77.6 points out of 100) at East China Normal University and 663 (88.4) at Beijing Normal University, and for science undergraduate degrees 482 (76.5) points at East China Normal University and 644 (85.8) points at Beijing Normal University. Still, as stated above, average scores also differ inside the same institution. East China Normal University's[69] 2015 lowest admission score for science students from Tibet (maximum 750 points) ranged from 342 points (45.6) for ethnic minorities to 460 (61.3) for Han students. The art score for Shanxi province (out of 750 points) students started from 738 points (98.4) while the physical education score for Inner Mongolia (maximum 750 points) started from 93.3 points.

On the other hand, as explained in the theoretical framework, independent enrolment is used by certain institutions which do not require passing the Gaokao. This system is still a new and pilot process for many universities as part of a recent reform aiming to expand universities' autonomy. It started in 2003, when the Ministry of Education allowed 22 colleges and universities (nowadays more than 90) to design their own recruitment system for 5% of their students. Because of these policies, universities using this method are concurrently using the regular enrolment path. Independent enrolment is often available for a reduced percentage of students and/or for specific majors.

Universities using this type of selection process are mainly key universities with many applicants and excellent results; in independent enrolment universities plan their own selection process and can design their own entrance examination which can include, or take as a reference, the High School Proficiency Exam (Zhongkao), interviews, specific assessment, portfolios, or other requirements. Independent enrolments usually include written tests and interviews, for example at East China Normal University, Fudan University, Central China Normal University and Beijing Normal University.

For some universities, the grade obtained in the High School Proficiency Exam is an important reference. For instance, East China Normal University's 2013 policies (East China Normal University, 2013a), starting in 2016, allow pupils to apply for its programmes if they fulfil certain requirements: seven A-grades out of the ten assessed subjects, always including

[69] Official data retrieved from the East China Normal University website. Can be consulted at: http://www.zsb.ecnu.edu.cn/webapp/admitSearch.jsp [July 8, 2015]

language, mathematics and foreign language. If candidates want to enrol in a liberal arts programme, politics, history and geography subjects should have an A-grade, while physical science candidates should get As in chemistry and life sciences. Besides these requirements, extra examinations in language and mathematics can be taken.

Extra assessments or interviews, directly designed by each university, are always taken. In a similar way, Fudan University reformed its recruitment system in 2013 to select outstanding students in Jiangsu, Zhejiang and Shanghai. According to the *2014 Fudan University Admissions Guide for the Experimental Independent Enrolment Reform (Jiangsu, Zhejiang and Shanghai)* (Fudan University Admissions Office, 2013a), excellent students from secondary key schools with high and direct references, or those who participated in the 2014 Fudan Proficiency Test and obtained first-rate results, are eligible to enter through independent enrolment. The Fudan Proficiency Test is a written evaluation which examines, through 200 multiple-choice questions in 3 hours, comprehensive knowledge extracted from the secondary school curriculum (Fudan University Admissions Office, 2013b). However, there are limited places to register through the independent enrolment procedure: around 540 for Shanghai, 130 for Zhejiang Province and 130 for Jiangsu Province.

At Fudan University, as generally at all universities with independent enrolment, the requirements students should fulfil are excellent scores in both secondary school classes and secondary school proficiency tests, and material proof of outstanding ability level in some subjects depending on the major they wish to enrol in, such as awards, papers or artworks. After pre-application, all candidates have an interview with experts in arts, science or medicine. Similar requisites are asked for by Beijing Normal University and Central China Normal University (Central China Normal University Admissions Office, 2013), which also demands students have a recommendation letter from their secondary school.

Universities also use independent enrolment to select the best candidates to enter the teaching profession through a free-fee programme. According to China's *National Plan for Medium and Long-term Education Reform and Development* (2010-2020) and *the Notice for Normal Universities directly under the Ministry of Education Free Education (Trial Implementation)* (Ministry of Education, Ministry of Finance, Ministry of Human Resources and the Central Office, 2007), normal universities (mainly those directly under the Ministry of Education) are already offering free education in teaching majors as a way to recruit high-profile candidates.

In 2013, East China Normal University (2013b) offered a maximum of 150 free-fee places for teaching majors in Chinese language and literature, English, mathematics, history, biology, geology, speech and hearing sciences, politics, early childhood education, special education, physics, psychology and chemistry. Following the policies of universities directly under the management of the Ministry of Education, other universities are offering free-fee education for future teachers, such as Shanghai Normal University (2013), which in 2013 offered a total of 200 free-fee places for early childhood education (20 for liberal arts and 10 for science), primary education (30 for liberal arts and 30 for science), English language teachers (20 and 10), Chinese language and literature teaching major (30) and the mathematics teaching major (30) and chemistry teaching major (20).

For both ways of selecting candidates to enter a teaching degree, it is difficult to assess whether their profile is higher or lower than other candidates, since students entering a teaching degree for secondary school in concurrent models also enter a degree for a specific subject. Whether their priority is teaching or being a scientist, linguist or artist is difficult to determine. Secondary teachers' profile is at the same level as non-normal degrees.

5.2. SPAIN

5.2.1. HISTORICAL PERSPECTIVE

This section is based on well-known Spanish researchers whose work focuses on teacher education as Olaya Villar (1999), González Astudillo (2008), Benso Calvo (2010), Egido Gálvez (2011), Gutiérrez González (2011), Puelles (2011), Estebaranz (2012), Manso (2012) and Viñao (2013).

Teacher education in Spain, especially secondary teachers' education, does not have the prestigious history of Chinese progression and did not start 2,000 years ago. On one hand, primary teachers have benefited from a long tradition of education with official structures. On the other hand, secondary teachers have lacked this kind of programme and when they were legally established, the practical application had, generally speaking, important deficits (Olaya Villar, 1999). As a result of this late education awakening, secondary teachers were not a central point of education but, as Yanes Cabrera (2010) notes, "invisible in the descriptions and reports related to the educative system" (p. 229).

In Spain, as in the whole of Europe, primary teachers have historically been prepared following a 'normalist model', with a high percentage of their education focusing on pedagogy and methodology under a concurrent model in normal schools, while secondary teachers belonged to an 'academic model' developed in universities in a consecutive model where the core preparation was scientific, and pedagogy had little relevance (Egido Gálvez, 2011).

The social and economic transformations during the last period of the 19th century provoked a crisis in the traditional and elitist secondary education system across Europe (Benso Calvo, 2010). Its final balance resulted in the establishment of national systems which challenged their own discriminatory history and gradually opened up towards more students from lower classes. In Spain, secondary education became a basic level of the general system of education as a consequence of the First Spanish Constitution signed in 1812, and the Quintana Report of 1813 (Puelles, 2011). From that point on, teacher education has undergone several reforms.

Controversially, since the mid-1800s, there have been numerous failed attempts to set up secondary teachers' education systems which include professional and didactical education alongside scientific education (González Astudillo, 2008). The difficulty at the root of some

of these plans comes from the preconceived ideas of parents, teachers and societies; the traditional and independent character of secondary education; the fact that more students from different backgrounds opted to enter this level; the lack of specific academic plans; and the inherent academic character of secondary education.

Similar processes and challenges were taking place all over Europe, and from the mid-19th century, secondary education became a concern in most European societies. Spain started to have European influences, mainly from France (Puelles, 2011; Manso, 2012), Germany and central European countries (Benso Calvo, 2010) while dealing with political changes, war and chaos.

Viñao (2013) categorizes the education system of secondary teachers during the 19th and the 20th century, into six key models: the initial model (1835-1850), the Normal School of Philosophy (1846-1852), the predominant model, the Institutes-Schools (1918-1936) and the downgraded replicas during Franco's dictatorship (1952-1969), the Pedagogical Aptitude Course (1970-1990) and the current Master's in Education. These models are the guide to further explaining this section, and are included in Figure 5.2, summing up the main phases of secondary teachers' education and its milestones since 1800.

The first secondary school was established in Spain in 1835 (Viñao, 2013), but it was not until 1845, with the Pidal Plan, that secondary education acquired a meaning as an independent level (Puelles, 2011). The Pidal Plan is considered to have been the starting point of the teaching profession for teachers in both secondary and tertiary education. Nonetheless, at that time, teachers for secondary education were prepared alongside university teachers, since the institutional categorization was still vague. Two years later, in 1847, the Plan Pastor Diaz finally separated high schools from universities, and hence their teaching bodies.

While this process was still in motion, separating secondary and tertiary education, teachers were prepared, since 1843, in the Faculty of Philosophy in undergraduate programmes (Viñao, 2013). Teachers for humanities and sciences attended the same faculty until 1855 when this institution was divided into two faculties, Literature and Philosophy, and Exact Sciences, Physics and Natural Sciences.

At that point, during the first stage detected by Viñao, the teacher education system was already settled as the so-called 'predominant model', separating education and selection.

However, the lack of professionals to cover all educative needs often forced the administration to hire substitutes, mainly recognized people such as doctors, lawyers or priests. The predominant model refers to a plan in which student teachers have an undergraduate diploma or concentration, and gain access to the teaching profession through an assessment/exam. In this type of model, teacher education and its future selection are not connected and pedagogical education is non-existent or scarce.

Two years later, in 1857, and more than a decade after the beginning of secondary education implementation, the Law of Public Instruction (known as the Law Moyano) regulated and formalized the teaching profession for secondary teachers (Viñao, 2013). It determined that candidates for teaching in secondary education should have a university undergraduate degree as a prerequisite for accessing the selection examination. Hence, this regulation reinforced the traditional and predominant model. This law also considered normal schools as professional institutions, separated from high schools and universities (Egido Gálvez, 2011), reinforcing the professional character of teaching.

Nonetheless, it would not be until almost 50 years later that secondary teachers' education took a relevant place in official and higher education institutions. In 1904, the Philosophy Section of the Faculty of Philosophy and Letters of the Central University of Madrid created a chair with a concentration on Pedagogy. Education programmes for secondary teachers lasted at least a year, after obtaining a Bachelor's degree. This specialization was cancelled in 1929, but was somehow renewed in 1932, alongside eight other specializations (Manso, 2012).

Amid this chaos and de-structuration, one of the most advanced and forward-thinking initiatives, the Normal School of Philosophy, took place between 1846 and 1852. Though the active time of this school of thought was short, its consequences and system were considered for a long period of time as one of the best examples and precedents in teacher education in Spain, and were reproduced, at least partially, during teachers' history. This philosophy took its model from the French system and the faculties of engineers, and was adapted to the educational needs of teachers.

The Normal School of Philosophy was the first official and regulated institution to offer secondary teachers' initial education, which ran, according to Manso (2012), during two short periods. During the first period, from 1842 to 1852, two sections opened (one for sciences

and the other for philosophy); in the second period, from 1868 to 1874, it focused on pedagogical education more than science knowledge.

From 1846 to 1849, a pilot programme of three years was established, and, since there was a deep need for teachers, jobs were almost guaranteed. The outcomes were quite satisfactory, which boosted the academic programmes to four years, in three concentrations: Literature, Physics and Mathematics Sciences, and Natural Sciences. The plan integrated, for the first time, pedagogy and subject knowledge classes. Another innovation was the cancellation of the post-programme selection examination, since selection was inherently made before starting the studies.

Although, as aforementioned, the institution had a short life, its roots were already growing as parallel groups promoted educative initiatives. At that time, education was strongly linked to religious, moral and political beliefs, which led to the formation of an unofficial group of free thinkers and intellectuals called the Free Educational Institution, who aimed to achieve academic freedom. This group had a great impact on education for half a century (1876-1936), but as independent thinkers, they had to carry on their educational work outside the official channels, at least at the beginning of its foundation. Their first secular private institution of education started at university level, and later widened to primary and secondary education.

The period in which the Free Educational Institution developed, at the end of the 19th century and in the first thirty years of the 20th century, is known as the "Silver Age of Spanish culture", to which Professor Puelles (2011) adds the "Silver Age of pedagogical renovation".

Under the lights of this movement, another progressive initiative for secondary teachers' education took place: The Institutes-Schools (1918-1936) started in Madrid in 1918. They experienced an important enhancement during the Second Spanish Republic (1931-1936/39), when institute-schools were set up in Barcelona (1931), Valencia (1932), Seville (1933), and Malaga and Gijon (1933, never operated) (Viñao, 2013), but were definitely cut at the beginning of the Spanish Civil War (1936-1939).

The institute-schools were highly innovative institutions regarding teachers' scientific and pedagogical education, including practicum, school administrative work, international scholarships and exchanges, and language aptitudes in two languages (Puelles, 2011; Ramírez Aisa, 1994, cited in Manso, 2012; Viñao, 2013). Students, having a previous undergraduate

diploma, entered a 2-year practices programme, studied two languages, participated in workshops with academic authorities or inside the institute-schools, studied pedagogy and philosophy and had the possibility to obtain a scholarship and participate in programmes abroad. The influence of the Free Educational Institution lasted until the beginning of the dictatorship.

Furthermore, the Second Spanish Republic (1931-1936) established a Section of Pedagogy in the Faculty of Philosophy and Letters, responsible for issuing the Certificate of Pedagogical Aptitude, requisite for sitting the teachers' profession entrance examination. A similar system was later reproduced in 1969, when each university had its own Institute of Educational Sciences, as a research institution, which also issued the corresponding certificate. These initiatives were the seeds of the current pedagogy departments in the Spanish universities.

The instability and brief life of the education programmes for secondary education teachers was again undermined and weakened after the Spanish Civil War and during the whole dictatorship, which for more than fifteen years (1939-1955) did not reach any stable system or established any institution to prepare secondary teachers. Throughout the dictatorship period, several initiatives were released, the first being the creation of the Centre of Didactic Orientation for Secondary Education (1955) which included the School for Teacher Education. Two years later, in 1957, a new role for student teachers appeared: 'scholarship assistants'. At that time, teachers participated in school practice after attending theoretical lessons in faculties, which also included tutor-mentored practice.

From 1957 to 1964, students who passed a selection exam and had a previous university undergraduate diploma, entered a 2-year programme, with some kind of economic remuneration and being considered scholarship assistants. However, this situation did not last very long, since five years later the titled changed from 'scholarship assistants' to 'assistants' and not all students received a scholarship (Viñao, 2013). The plan was further detailed in 1965, when the 2-year practices were divided into one year for theoretical knowledge and one year for classroom practices. The qualification obtained at the end of this course was taken into account for the profession entrance examination, but was not compulsory.

The role of student assistants developed until, the same year, in 1965, the Training Schools for Middle Grade Teachers was inaugurated, with the responsibility to issue the

Certificate of Pedagogical Aptitude. Only four years later, in 1969, the Institutes of Educational Science opened, taking over the Training Schools. Secondary teachers kept being prepared in regular faculties with little pedagogical education and a high emphasis on knowledge. Programmes were uneven and systematization almost non-existent.

In this scenario, a new official system to prepare secondary teachers was born in 1970, with only superficial changes from the previous schemes' academic plans. The Pedagogical Aptitude Course (1970-1990) was set up alongside the last education law under a non-democratic system (the General Law of Education, 1970). It has three significant variations from preceding systems: (1) compulsory character of the course to sit the recruitment exam, although it could be validated with previous experience in middle schools or certain research institutes (Gutiérrez González, 2011; Estebaranz, 2012); (2) it opened access to this course to all graduates of a university undergraduate degree; and, (3) it gave the responsibility for organization and administration to universities instead of the Training Schools for Middle Grade Teachers (subordinate to the Ministry of Education), (Viñao, 2013). Hence, the responsible bodies for this plan were the Institutes of Educational Sciences (colleges), (Olaya Villar, 1999; Egido Gálvez, 2011; Viñao, 2013).

The Pedagogical Aptitude Course (known as CAP for its acronym in Spanish) was theoretically planned as a 300-hour programme, divided into two periods of 150 hours, one for theoretical classes and one for practice (Olaya Villar, 1999; González Astudillo, 2008; Manso, 2012). It was initially planned to last one semester or six months, and practices were planned to be under the supervision of two or three tutor-teachers (González Astudillo, 2008). In reality, plans at different universities showed great variances, with practices taking 100, 150 or 200 hours (Estebaranz, 2012). Different modalities were planned to decrease the real time of the programme, which were poorly organized distance education, weekend or vacation courses (Olaya Villar, 1999).

This reform was object to several criticisms and was not correctly implemented, generalized or systematic (Egido Gálvez, 2011). Some universities planned a certain length, contents and objectives, but the most common practice was to understand this course as a mere formality to sit the recruitment exam and to obtain the certificate.

Other opinions and criticisms highlighted that several universities offered distance education short courses with little exigency (Egido Gálvez, 2011); teachers were not specialized professionals and often took teaching places in the CAP as a complement to their

ordinary work schedule; classes were overcrowded and students lacked motivation (Viñao, 2013); there was low valuation of secondary teachers who took the CAP (Manso, 2012); the lack of official economic aid which led to a situation where students were asked to pay high fees, while the programmes were highly uneven among universities; scarce administrative recognition (Gutiérrez González, 2011); and shortage of resources (Olaya Villar, 1999), among others.

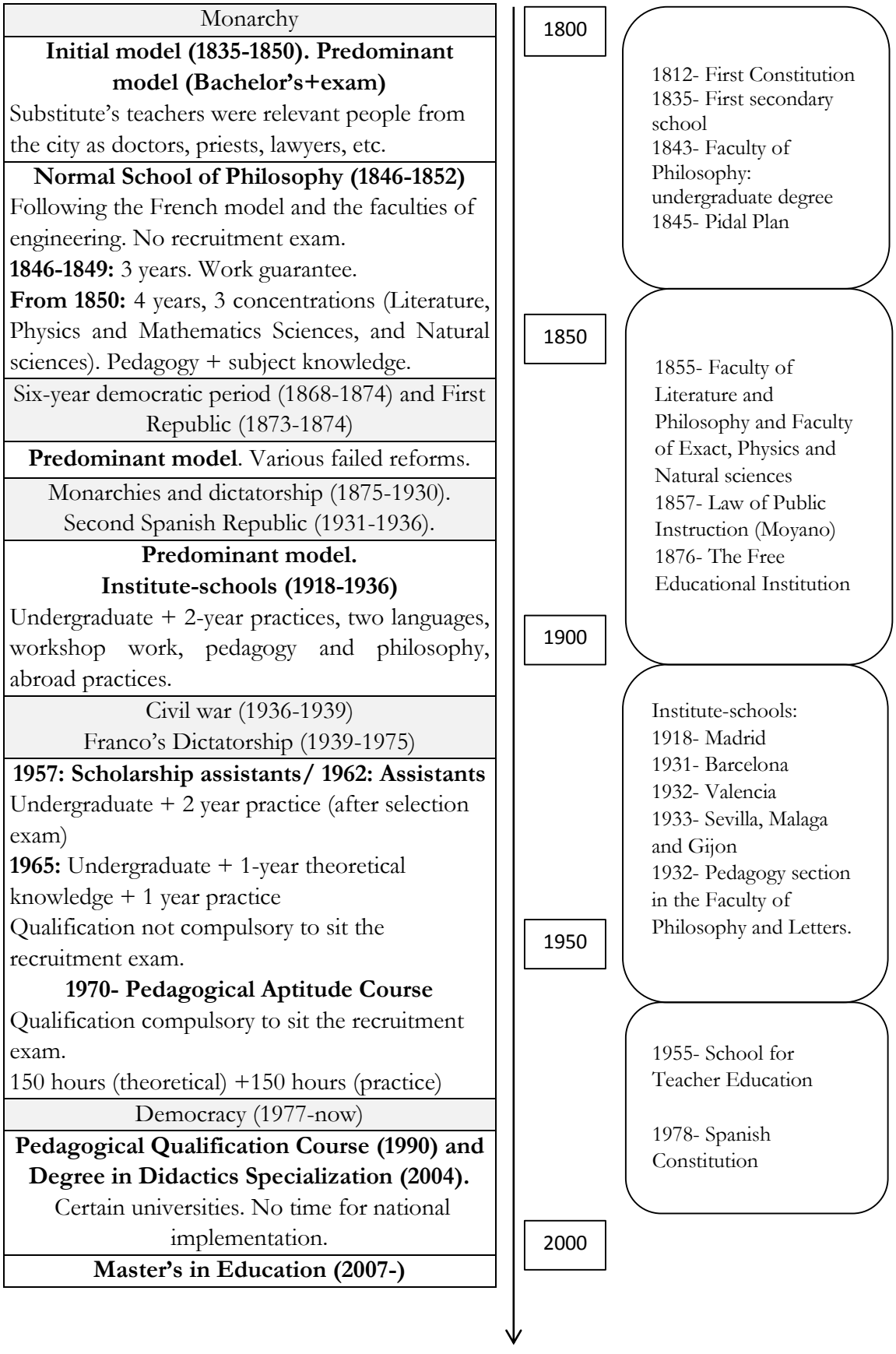
Despite the numerous criticisms, this model remained active until 1990, when the Pedagogical Qualification Course (1990) was released as a consequence of the new general law on education, the Organic Law on General Education System (known as LOGSE). The specific order regulating this programme was approved in 1995, and had, according to Manso (2012), three core ideas: to focus on the professionalization of teaching, to seek a better understanding of the three institutions (universities, secondary schools and production sectors), and to give more relevance to the practices.

The new paradigm maintained a consecutive model, and organized the subjects into general compulsory and specifics, electives and practicum. According to González Sanmamed (2009), it received positive criticisms because of the increment of the credits (minimum 60 and maximum 75) and the time (one year), with greater development of the practicum. Each credit corresponded to 10 on-site class hours, and the practicum took between 20 and 25 credits, more than the theoretical lessons (between 19 and 23) and the theoretical-practical classes (16 to 20 credits).

However, the implementation of this proposal was limited. A political change in 1996 and a new general education law, the Law on Quality of Education (2002), known as LOCE, paralysed the previous proposal and established the Course on Didactics Specialization (2004). This plan was formed by common (25.5 credits), specific (12 credits) and elective or complementary (11 credits) subjects. The practicum was designed to take at least 3 months, 12 credits in a teaching module and a final thesis.

Nonetheless, as happened with the previous Pedagogical Qualification Course, the arrival of a new general education law in 2006 and the Master's, the last programme regarding teacher education, prevented this plan from being implemented, except in some universities. The next section addresses the development and implementation of the Master's, the main object of this research. Figure 5.2 shows the evolution of secondary teachers' initial education in Spain during the last century.

Figure 5.2: Evolution of secondary teachers' initial education in Spain



Source: Researcher's original work

5.2.2. CONTEMPORARY DILEMMAS AND GUIDELINES FOR REFORMS

Traditionally, since the level of secondary education was not itself a main concern for politicians or society, secondary teachers' education has not received adequate attention. At first, the need to spread primary education (and later junior secondary education) as basic and compulsory, has led for many years to a situation where core policies and reforms have focused on primary education and its teachers. However, the professionalization of the career and a significant increase in secondary school teachers and students, starting mainly from the 1970s (Manso, 2012), has progressively included senior secondary education as a main topic in Spanish educative policies.

The importance of secondary education as a level, and its teachers, has taken on special relevance since the entrance of Spain to the European Union and the establishment of the European Area of Higher Education. As a consequence, in 2004, the Spanish Ministry of Education published a document analysing teacher education shortfalls and ways to adapt the new structures to the European Area of Higher Education.

In this proposal, the Ministry of Education stressed specific guidelines to reform teacher education, such as on the differences between compulsory and post-compulsory secondary education, the understanding of students' development needs in each level and the curricular differences, mainly in the first years of junior secondary school (where comprehensive competencies should be taken into consideration more than subject knowledge, contrary to the core contents in senior secondary education). The proposal highlighted the fact that organizing teachers in departments does not facilitate teachers' cooperation among different levels and fields, and how this kind of coordination is extremely important in the first years of secondary education.

New plans for initial teacher education were intended to be adapted to the EAHE, but also to promote innovation, practical experiences, and more sensible attitudes towards cultural and pedagogical exigencies. It was decided that teacher selection should assess academic and pedagogical competencies, and the process should assure equality and transparency. The induction process must be mentored and all new teachers undergo a year of practice or probation, where their teaching is supported by a tutor, added to participation in pedagogical meetings and teachers' assemblies. It also emphasizes the need to raise teachers' status, to improve their professionalization and their professional development.

As in Spain, most western countries have recently undergone deep reforms in their teachers' educative systems (Tiana, 2013), and the importance of teacher education has become a concern for both national and supranational policies. Spain has participated in numerous international studies, such as Barber and Morushed (2007), or evaluations, such as PISA. Academic results in these studies have also affected the way in which Spanish policies address teacher education. Having a wider understanding and perceiving Spain under an international perspective is being taken as a way to progress, without forgetting specific national characteristics.

Nonetheless, throughout recent history, as explained in the previous section, secondary teachers' education has theoretically undergone several variations, yet numerous debates and criticisms persist. The critics mainly tackle ways to improve structure, contents or the practicum, among others. Still, many authors maintain that the recent modifications have been too superficial and there has not been substantial reform, claiming that the main paradigm remains the same and a deeper reform or an adaptation of the actual system should take place (Viñao, 2013).

One of the central problems in today's Spanish education is instability, originated by the political battle over the educative system. Almost every change in the political party in power has led to a reform of education, or at least, the intention to establish new or modified legislation. However, some of these reforms, such as the Law on Quality of Education (2002), never took place, were transitory or the implementation did not have enough time to take root. Since the beginning of democracy, there have been seven educative laws, but only three were really significant, the General Law of Education (1970-1990), the Organic Law on General Education System (1990-2006) and the Organic Law on Education (2006-2013).

As aforementioned, regarding secondary teachers' initial education, only two proposals have been made and fully implemented in recent history: the Pedagogical Aptitude Course (1970), consequence of the first Institutes of Educational Sciences (1969) and the General Law of Education (1970), (Estebaranz, 2012; Manso, 2012; Viñao, 2013); and the Master's Degree Programme for Secondary Teachers' Initial Education. The Master's for secondary teachers was a consequence of the Organic Law of Education (2006) and the guidelines of the Organic Law on Universities (2007), and a legislative adaptation to the European Higher Education System and the new paradigm of key competencies (Egido Gálvez, 2011; Manso,

2012; Tiana, 2013). This research focuses on the results of this last reform, as an improvement to some of the criticisms made of previous systems.

However, as Alejandro Tiana, one of the professors directly involved in the last reform (the Master's), stated in 2013, the system is still incomplete and has some limitations. The author frames the criticisms into two key categories, the model and the process of implementation. According to Tiana, the current model, which grants universities great autonomy to adapt their degrees to the European Area of Higher Education, should motivate more and greater interaction between the general educative system, schools and secondary institutions, taking into account the opinions and needs of the professionals and institutions where future teachers develop their careers. It should promote a wider communication between universities and schools.

Other aspects, such as limiting the number of teacher-to-be students, improving the mentoring system or redefining the practicum, are considered by the author. On the other hand, in order to obtain well-trained and motivated teachers who are ready to keep learning through their entire career, team-workers, collaborative and committed to their work, Spain needs broader policies to help link teacher initial education and the fundamental components of the teaching profession and professional development.

There are other criticisms made of this last reform, which started to be implemented in academic year 2009/2010. However, some of the bases of the criticisms resides in historical and cultural features more than exclusively in the new system. For instance, historically, there has been a large dilemma tackling the distribution of academic and pedagogical education. According to Egido Gálvez, "The opposition between those who believe that knowledge of academic disciplines should be prioritized and those who emphasize pedagogical subjects has been a constant dilemma in the reforms of teacher education in our country and has led over time to a sterile debate that ignores the need for both types of components in the training of teachers"[70] (Egido Gálvez, 2011, p. 44). Other difficulties are related to the actual challenges, namely, adaptation to the European Area of Higher Education and the integration of key competencies as basis of the programmes. The integration of this complex context leads to an impossibility of carrying on a radical change, for example to a consecutive model.

[70] Personal translation from the Spanish version.

However, other shortages and policies for future reforms are being discussed among academics, related to the relationship between initial teacher education, continuous education and career development, the possibility of establishing a common basis for all teachers (including non-compulsory education teachers), the fees for the Master's (which are considerably higher than those for Bachelor's degrees), and whether there is a need to retain an extra selection assessment after the Master's or whether access to the Master's is already enough selection (Viñao, 2013).

Other voices have tackled the need to renew teachers' knowledge with both generalist and specific subject knowledge according to the actual structure of secondary education, and to promote a type of education for teachers who reflects about their own practices, and who teach in different levels, junior secondary education (compulsory) and senior secondary education (post-compulsory). At the same time, academics' opinions affirm that policies should focus on teachers' professional self-esteem and status, the feminization of the profession and the lack of teachers' performance or criteria for accessing secondary teachers' education programmes (Prats, 2000). Other complaints are motivated by the lack of financial support for carrying out all the reforms, the disparity of fees among universities, and the lack of connection between the theoretical and practical modules of the Master's (Gutiérrez González, 2011).

Most intellectuals and international and national researchers give great importance to the practicum as a fundamental element in any teacher education programme. The practicum is understood as the backbone of the programmes and key to organizing and coordinating the modules, facilitating the analysis of the competencies acquired during the courses (Gutiérrez González, 2011).

However, this step is still being reformed. For instance, a study by Valle and Manso (2013) manifests concern about a legal gap regulating this period of teacher education as well as the induction process. The research highlights the lack of legal provisions to delimit new teachers' participation in induction programmes, as well as the fact that each autonomous community independently designs its teachers' first year. It is obvious that teachers are also worried about this situation, as presented by 80% of teachers claiming the need to establish a specific induction plan to facilitate the transit from teacher-students to teachers (Valle and Mando, 2013).

Nowadays many universities are adapting the plans and trying to tackle these difficulties. However, only five years after the implementation of the last reform (and the beginning of the Master's in 2010), it seems that new reforms will take place in university programmes. According to the Ministry of Education (MECS, 2015c), in January 2015, the Council of Ministers approved a Royal Decree establishing a new organization of official university studies. The government expected to start implementing the new system in September 2015, however, since the first graduates of the current system finished in 2014 and there has not been time to evaluate the results, the Spanish Rectors Conference later agreed to postpone the implementation until 2017.

This new Royal Decree gives more flexibility to universities, which from 2017 will be able to offer both the actual 4+1 (240 ECTS for the undergraduate degree and a 60-credit Master's) and a new 3+2 (180-ECTS degree and 120-credit Master's), with both paths totalling 300 ECTS to accede to a PhD programme. Every university will be able to choose which degrees are designed in each path, and therefore the same degree could be offered through different paths in diverse universities. Consequently, the future design of secondary teachers' education remains uncertain.

Many dilemmas regarding teacher education have yet to be resolved (Egido Gálvez, 2011), and legislation and teachers are slowly adapting to the new Spanish circumstances, European guidelines and needs of globalization. To better understand the current situation in initial secondary teachers' education, the next section explains the actual legislation.

5.2.3. SECONDARY TEACHERS' EDUCATION LEGISLATION AND REGULATIONS

As explained in the preceding section, secondary teachers' education is currently planned as a 1-year Master's degree. The core reference for further developing the Master's is the already described Organic Law 2/2006, of 3 May, on Education. However, it is essential to emphasize and understand how the Master's resulting from the LOE has embodied a deep break with previous secondary teachers' education programmes.

This study has already tackled the development of the issue during the last century. In Spanish history, the CAP, starting from 8 July 1971, was the most stable programme for secondary teachers' initial education (Manso, 2012) and was, for more than forty years, the only consistent programme established in Spain. Due to its vague guidelines and diverse

political changes, it was applied in each autonomous community and by each university in a different way, and suffered several variations. The CAP was the first specific plan for secondary teacher education, and therefore had several aspects that could be improved, such as the lack of a training and practical period (Manso, 2012).

Neither of the two proposals made after the CAP (the Pedagogical Qualification Course and the Degree on Didactics Specialization) were finally consolidated as national and stable degrees. Clearly, the stability of the LOE and the creation of the Master's represented a key enhancement for the profession.

In Organic Law 2/2006, of 3 May, on Education, there is no specific article related to secondary teachers' education, since they are regulated as all other teachers, mainly in Title III (Teachers). However, this act planned the required qualification to teach in both junior and senior secondary education, establishing a minimum degree as an undergraduate, engineering, architecture or equivalent qualification complemented with post-graduate training in pedagogy and didactics (Articles 94, 95 and 97). This regulation also highlighted the requirements to adapt teacher education programmes to the European Area of Higher Education (Article 100). As for further work in public schools, the legislation entailed the need to pass a selection process after finishing the post-graduate education.

Besides this general law, there are two main pieces of complementary legislation related to secondary teachers' initial education:

- Royal Decree 1834/2008, of 8 November. Definition of teachers' initial education for teaching in compulsory secondary education, senior secondary education, vocational training and specialized education. Organization of secondary teachers' concentrations (MECS, 2008).

- Order ECI/3858/2007, of 27 December, on requirements for the verification of official university degrees that qualify teachers' professional practice in junior and senior secondary education, vocational training and languages education (MECS, 2007c).

The Royal Decree 1834/2008 of 8 November determined a new starting point for secondary teachers' initial education. It resolved to settle an official expiration date for the previous secondary teachers' education system, the Pedagogical Aptitude Course. As a consequence, universities were obliged to replace, beginning from 1 October 2009, their

previous courses, which lacked national and European harmonization, for the 1-year Master's degree designed in line with modern European policies.

The new regulation also settled the basis to further develop the Master's degree. It determined 44 concentration fields (Annex 1 of the decree) for secondary teachers (not including vocational training), which are later classified according to the subject in which each teacher would be allowed to teach (Annex 3 for junior secondary general education and Annex 4 for senior secondary general education).

According to this Royal Decree, teachers' specializations in junior and senior secondary schools are categorized into 18 groups: German language, biology and geology, drawing, physical education, philosophy, physics and chemistry, French language, geography and history, Greek, English language, Italian language, Latin, Castilian language and literature, mathematics, music, Portuguese language, technology and ICT (replaced by economics in senior secondary education). Secondary school subjects must be covered by specialized teachers in these areas. Nonetheless, after attending the Master's, holders of other degrees which belong to similar areas (Annex 5 of the decree) can accede to the teaching profession in a secondary school subject (for example people with an organization and business management or a business administration degree can teach economics).

The profiles and requirements of each of the secondary teachers' specialities aim to be satisfied by the Master's degree which is, in turn, defined by Order ECI/3858/2007 of 27 December. This regulation revolves around the current European trend of competencies (deepened in Section 5.2.6) instead of exclusively relying on specific subjects. However, general and compulsory guidelines assure a grade of national harmonization. This order also stressed that secondary teachers' Master's last one year and at the end students obtain a qualification to work as both junior and senior secondary teachers.

To be approved by quality agencies, the Master's should have an unequivocal and clear title related to the profession of teaching in secondary schools. To access these programmes, students should hold a previous degree, (related to one of the subjects in the secondary curriculum), which allows entrance to a Master's and at least B1 level in a foreign language, according to the Common European Framework of Reference for Languages (This is divided into three levels (A, B, C) with two sublevels (1 and 2). B1 corresponds to independent user (B) and vantage or upper intermediate (1).)

Three years after Order ECI/3858/2007 was passed, Royal Decree 860/2010 of 2 July, referring to the regulation of junior and senior secondary teachers' initial education for private schools was released by the Ministry of Education, Culture and Sport (2010b). It stipulates that secondary teachers in private institutions should have the same qualification as those in public schools. By releasing this regulation, the government covered two objectives, first, it assured a minimum level of homogenization between public and private institutions, and second, it consolidated teaching as a recognized profession with a specific qualification at Master's level.

Again, three requisites are demanded: holding a Bachelor's, engineering or architecture degree; having specific qualifications to teach a secondary school subject; and fulfilling the requirements of the LOE (Master's in education). It includes an annex with the suitable degrees to teach each of the subjects.

The contemporary system came into being as a Master's degree, which is based on the combination of these acts and the subsequent legislation released by each autonomous community, and finally made concrete by each university. Regional orders are published in their regional official gazettes, mainly focused on regulating the practicum and the selection process for the schools in which the practicum takes place. Since each administrative level has to respect the national acts, the next section addresses where and how, in terms of general structure, this legislation is being applied.

5.2.4. SECONDARY TEACHERS' EDUCATION INSTITUTIONS AND PATHS

In Spain, after senior secondary education, higher education institutions are only divided into two categories: universities and professional training institutions. Professional training institutions offer vocational training and education, their programmes last two years, and the final qualification is related to a vocational/technical work or to the medium-category or first level of a qualified profession. These programmes are habitually given in high schools or institutions which share junior and/or senior secondary education and junior and/or senior secondary vocational training.

On the other hand, universities have their own campuses and buildings, rarely shared with other levels of education. They can be specialized in a determined field, such as technical universities; however, it is more common to find comprehensive universities, which offer all kinds of degrees distributed into faculties and departments. Differentiation between colleges,

universities, community colleges and other specifications, does not exist in Spain. The major difference among universities is only related to the origin of their funds, dividing higher education institutions into public or private.

As explained before, after the Bologna Process, academic degrees were nationally harmonized into 4-year programmes for almost all degrees, with some exceptions such as veterinary sciences, which lasts 5 years, or medicine, designed into a 6-year degree. However recent legislation has opened the door to place some degrees at Master's level while keeping a generic Bachelor's degree, hence some universities are currently adapting their degrees to the 3+2 system.

Regarding the institutions, and according to contemporary legislation, all educative programmes for early childhood, primary and secondary teachers' initial education take place in universities as Bachelor's degrees. The progression of universities offering the Master's in secondary teachers' initial education since the first year of its establishment in the educational landscape (2009/2010) has been clear. In 2009, 57 universities obtained the ANECA endorsement to implement the secondary teacher education Master's (Manso, 2012). At that time, according to the data published by the Ministry of Education (2009b), there were 77 universities (50 publicly funded and 27 private), which means 74% of the universities were allowed to prepare secondary school teachers.

Nowadays, according to the National Registry of Universities, Centres and Degrees (RUCT in their original acronym[71]) there are 83 universities, 50 public and 33 private institutions (MECS, 2015d), out of which 73 offer secondary teachers' initial education Master's programmes for academic year 2015/2016. These data explain two important notions in the actual educational landscape in Spain: the fact that private education has rapidly risen in the last decade (six new private universities in six years, but no new public university), and the fact that 87% (13% more than 6 years ago) of these institutions are certified to offer a secondary teachers' education Master's.

[71] This national registry was created in 2008, and includes all the official undergraduate, Master's and Doctoral degrees offered by all the Spanish universities, which are in turn, verified by ANECA (National Agency for Quality Assessment and Accreditation). Public data for each degree are accessible, including the specific Royal Decree regulating the programmes, the official denomination and the field of study.

The most common modality is on-site education, but there are also universities offering distance-learning education, except for the practicum which must, according to education legislation, take place in schools. The best-known distance-learning education university is the National University of Distance Education (UNED). UNED is the only university run by the central government of Spain, its headquarters are in Madrid and it has complementary campuses in all autonomous communities. Other universities offer the Master's in distance-learning education modality, such as the International University of La Rioja (UNIR) or University Camilo Jose Cela.

Owing to this general situation and legislation application, paths are nationally harmonized, and students can only obtain a secondary teacher qualification through a consecutive path (undergraduate degree + Master's). In Spain, there are no alternative paths to becoming a secondary teacher, and the differences among Master's programmes depend on universities' planning and management. The next section covers the official organization of the curriculum.

5.2.5. DESIGN AND ORGANIZATION OF SECONDARY TEACHERS' EDUCATION CURRICULUM

The Master's curriculum is organized according to Order ECI/3858/2007. It is designed for one academic year, comprising 60 ECTS (1,500 hours) of which at least 80% should be on-campus (including the practicum, which must necessarily be on-site education). Curricula credits are organized into three education modules which are, in turn, divided into blocks. The general curriculum is distributed as follows:

Table 5.11: National curriculum for the Master's in secondary teachers' initial education according to Order ECI/3858/2007

Modules	Blocks	ECTS
1. Generic	Learning and personality development Educational processes and contexts Society, family and education	12 (at least)
2. Specific	Complementary subject-teaching knowledge Specific-subject learning and teaching Teaching innovation and introduction to education research	24 (at least)
3. Practicum	Specific-subject practicum and final Master's thesis	16 (at least)
Classes designed by each university (not included in the Order)		8
Total ECTS		60

Source: Researcher's original work based on MECS (2007c)

Each block is defined in terms of its own objectives,[72] which must be reached through the general competencies to be acquired during the Master's. This order does not include any suggestions or guidelines to design the Master's thesis or to promote exchanges between universities and secondary schools. The outlines of the objectives to be taught are summed up in Table 5.12, not including the specific goals for vocational training or pedagogical and educational psychological orientation.

Table 5.12: Secondary teachers' initial education specific objectives by blocks

Blocks	Objectives
Generic Modules	
Learning and personality development	- Know and understand the characteristics of the students, their personality development process, their social contexts and motivations (including potential difficulties which may affect their learning). - Develop proposals based on the acquisition of knowledge, intellectual and emotional skills. These proposals should also identify and plan the needs of students with different abilities and different learning paces.

[72] In Order ECI/3858/2007 this section appears as "competencies"; a subsequent act, Order EDU/3498/2011 of 16 December, changed the title to "objectives".

Educational processes and contexts	- Understand the processes of interaction and communication in the classroom and in the centre, and know how to address and solve possible problems. - Understand the historical evolution of the educational system. - Know and apply information resources and strategies, tutoring and offering academic and vocational guidance. - Promote emotional and civic education. - Participate in the elaboration of the educational project and centre activities, under the criteria of quality improvement, attention to diversity, prevention of learning problems and coexistence.
Society, family and education	- Link education and environment. - Understand the educational role of the family and the community in the acquisition of both learning skills and values (respect for rights and freedoms, equal rights and opportunities for men and women and non-discrimination against people with disabilities). - Understand the historical evolution of the family, its different types and the impact of family background on education. - Acquire social skills in the field of family relationships and counselling.
Specific Modules	
Complementary subject-teaching knowledge	- Know the cultural and educational value of the contents. - Know the history, development and perspectives of the subject in order to transmit a dynamic vision. - Know contexts and situations in which to use or apply the contents.
Specific subject learning and teaching	- Know the theoretical and practical development of the area. - Use the curriculum to design programmes of activities, and to select and prepare educational materials. - Promote a climate that facilitates learning and values the contributions of students. - Use audiovisual and multimedia communication in the teaching-

	learning process. - Know strategies and assessment techniques and understand evaluation as a tool to regulate and encourage students' effort.
Teaching innovation and introduction to education research	- Know and apply innovative teaching. - Critically analyse the performance of teaching, good practices and direction using quality indicators. - Identify problems related to teaching and learning and propose alternatives and solutions. - Know and apply methodologies and basic techniques of design, innovation and evaluation in educational research.
Practicum	
Specific subject practicum and final Master's thesis	- Gain experience in planning, teaching and learning to use assessment materials relevant to the subject of specialization. - Demonstrate a high command of oral and written language in teaching. - Master the skills required to promote a climate that facilitates learning social skills and coexistence. - Participate in proposal improvement reflecting on practice. - Reflect these skills in the final thesis of the Master's.

Source: Researcher's original work based on MECS (2007c)

Following these objectives, universities develop and propose their own programmes to the national agency for quality of education. The final result, if similar in many universities, shows some flexibility to adapt the curriculum to universities' needs, philosophies and objectives. There is a clear preference from many institutions to allocate the ECTS under a 12-generic, 30-specific and 18-practicum scheme. This is the case of the Complutense University of Madrid, the University Camilo Jose Cela or the University of Extremadura. However other examples of distributions, in-campus or distance learning, and in public and private institutions, are as follows:

Table 5.13: Master's in secondary teachers' initial education. Examples of credit distribution in Spain

	Generic	Specific	Practicum	Free choice
Common scheme	12	30	18	
UNED	15	27	18	
La Laguna University	15	24	21	
UNIR	18	24	18	
University of Valencia	16	28	16	
University of Granada	12	24	16	8 ECTS (2 subjects out of 5)
TOTAL	60			

Source: Universities' official plan[73]

Unlike in China, programmes inside the same university have the same distribution of credits according to the general plan of each university. Programmes are later made concrete for each specific concentration. For instance, at the Autonomous University of Madrid, the distribution is as follows:

[73] The official master plans can be consulted at [September 18, 2015]:
Complutense university of Madrid: https://www.ucm.es/masterformacionprofesorado/plan-de-estudios
University Camilo Jose Cela: http://ucjc.edu/files/pdf/estudios/master-educacion-secundaria.pdf
University of Extremadura: http://tcc.unex.es/documentos/PlanEstudios-MasterSecundaria.pdf
UNED (National University of Distance Education): http://portal.uned.es/portal/page?_pageid=93,22164976&_dad=portal&_schema=PORTAL&idContenido=8
University of La Laguna: http://www.ull.es/view/master/formacionprofesorado/Plan_de_estudios_1/es
International University of La Rioja: http://gestor.unir.net/userfiles/file/documentos/fichas/masters-oficiales/master-secundaria.pdf
University of Valencia: http://www.uv.es/uvweb/master-profesorado-secundaria/es/programa-del-master/plan-estudios/plan-estudios/master-universitario-profesor/educacion-secundaria-1285886102408/Titulacio.html?id=1285850895044&plantilla=MU_Professorat_Secundaria/Page/TPGDetaill&p2=2-2
University of Granada: http://masteres.ugr.es/profesorado/pages/plan-de-estudios

Table 5.14: Autonomous University of Madrid secondary teachers' Master's programmes in physics, mathematics and foreign languages

Modules	Credits (% of the total degree)	
Subject Professional (physics, English and mathematics) courses	240 (80%)	Bachelor's
Generic	14 (4.7%)	Master's
Specific	26 (8.5%)	
Practicum	14 (4.7%) + 6 final theses (2%)	
Total credits teacher education	**60 (20%)**	
Total credits	300	

Source: Researchers' adaptation from Autonomous University of Madrid (2014a, 2014b, 2014c)

Lately, educational authorities and a large number of authors (Escudero Muñoz, 2009; Estebaranz, 2012; Manso 2012) have turned their interest towards one of the components of teacher education: the practicum. All of them concur to affirm that without good and effective training the gap between intentions and practices is condemned to keep widening.

The emphasis in this specific period of teachers' initial education has probably led to universities' programmes showing similar distribution of credits, even in some specifications which are not officially demanded. While some terms are legally established, such as the practicum credits having to be taken as on-site activities with no possibility to validate them with papers or other extra work, or the fact that schools and tutors participating in teachers-to-be practices must be recognized institutions, other settings are still open to interpretation. The legislation does not regulate partnerships between universities and schools, nationally control mentors' specific responsibilities, or update courses.

Another concomitant feature not established by law and regardless of the universities' total credit for the practicum is the fact that all institutions give 6 ECTS to the final Master's thesis. However, not all practicums are organized in the same way. Some universities, such as UNED or the University of La Laguna, have two types or periods of practicum, while others such as the University Complutense of Madrid or University of Valencia, have only one period.

Credit distribution also differs among institutions, with 6-ECT modules (University of Extremadura), 4-ECT modules (University Complutense of Madrid), 3-ECT modules (International University of La Rioja), or a mixed system to distribute credits, such as La Laguna, with modules of different ECT weights (6, 4, 3). The arrangement of the credits aims to reach high professional standards ultimately related to the competencies described for the job. The competencies to be achieved in secondary teachers' education, at both European and national level, are tackled in the next section.

5.2.6. SECONDARY TEACHERS' PROFESSIONAL COMPETENCIES

Secondary teachers' professional competencies are influenced at two levels, European and statewide. In this section both are explained as imperative for understanding how the conjugation of supranational and national tendencies can result in a deeper understanding of the general paradigm of modern teacher education. There is, however, a great difference between these two proposals. While the national guidelines are included in a general law with compulsory content, European information belongs to European studies which aim to understand, and later harmonize, European policies without being binding.

Many efforts and initiatives have been taken by the European Union focusing on the delimitation and establishment of teachers' competencies in Europe. Among others, in 2007, the Finnish Institute for Educational Research (FIER), under the promotion and as a result of a public initiative from the European Commission, carried on a study in this field. The study took place between 2008 and 2009 and was outlined by the Education and Training 2010 work programme. The main framework of the research was the already cited *Improving the Quality of Teacher Education* (European Commission, 2007b). One year later, in 2010, the results of this research performed in 27 countries were published.

This document has a clear objective directly linking teacher initial education and competencies (I Specific Objectives):

> "To assess the extent to which current provision for initial and in-service Teacher Education provides teachers with the knowledge, skills and competences set out in the list subsequently agreed with the Commission." (FIER, 2009, p. 45)

FIER make an approximation of a definition of teacher competencies and skills, showing differences between them. Nowadays, as when the FIER research was being carried out, each European country held a different definition of these terms. Therefore, this study chooses

the Finland example, where competencies are linked to working needs, while skills make reference to the abilities learned through training.

The definition for competence qualification was "Changes in working life often require changes in competencies. By analysing these changes systematically, core competencies can also be identified", while the reference to skill was defined as "An ability that has been acquired by training, e.g. literacy - the ability to read and write" (p. 32).

As a conclusion, the FIER study established eight groups of competencies: Subject competence, Pedagogic competence, Integration of theory and practice, Cooperation and collaboration, Quality assurance, Mobility, Leadership, and Continuing and Lifelong Learning.

Three years later, in 2013, the European Commission published a referential study (European Commission, 2013b), aiming to maintain deepening of teacher competencies, though not exclusively focusing on those developed during teachers' initial education. According to this research, competencies affect both quality and equality, as highlighted when affirming, "a lack of clarity about what society can expect from its teaching staff can make it more difficult for Member States to ensure that the same high standards of teaching apply in all schools" (p. 5). This statement was also stressed in another report from the Commission, affirming that the "lack of a system-wide consensus about minimum competence requirements and qualifications may limit countries' ability to safeguard quality" (European Commission, 2013c, p. 11).

As in the FIER study, different definitions are included for competence and skills. While competence is described as "a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain" (Deakin Crick, 2008, cited in European Commission, 2013b, p .9), skills makes reference to "the ability to perform complex acts with ease, precision and adaptability" (p. 9). The document comprises three common components to develop teacher competencies: knowledge, skills and attitudes or values.

The conclusions outline a classification of these competencies, which helped to design the European Comission research around a common ground. According to these components, and a common proposal made from different authors (Darling-Hammond and Bransford, 2005; Feiman-Nemser, 2001, 2008; Geijsel et al. 2009; González and Wagenaar,

2005; Hagger and McIntyre, 2006; Hatano and Oura, 2003; Kelly and Grenfell, 2004; Krauss et al., 2008; Mishra and Koehler, 2006; Williamson McDiarmid and Clevenger-Bright, 2008, cited in European Commission, 2013b), the Commission proposes the following categorization of competencies (Table 5.15):

Table 5.15: Teacher competencies in the European Union

Knowledge and Understanding	1. Subject matter knowledge
	2. Pedagogical Content Knowledge (PCK), implying deep knowledge about content and structure of subject matter: 2.1. knowledge of tasks, learning contexts and objectives 1.2. knowledge of students' prior knowledge and recurrent, subject-specific learning difficulties 2.3 strategic knowledge of instructional methods and curricular materials
	3. Pedagogical knowledge (knowledge of teaching and learning processes)
	4. Curricular knowledge (knowledge of subject curricula e.g. the planned and guided learning of subject-specific content)
	5. Educational sciences foundations (intercultural, historical, philosophical, psychological, sociological knowledge)
	6. Contextual, institutional, organizational aspects of educational policies
	7. Issues of inclusion and diversity
	8. Effective use of technologies in learning
	9. Developmental psychology
	10. Group processes and dynamics, learning theories, motivational issues
	11. Evaluation and assessment processes and methods
Skills	12. Planning, managing and coordinating teaching
	13. Using teaching materials and technologies
	14. Managing students and groups
	15. Monitoring, adapting and assessing teaching/learning objectives and processes

	16. Collecting, analysing, interpreting evidence and data (school learning outcomes, external assessments results) for professional decisions and teaching/learning improvement
	17. Using, developing and creating research knowledge to inform practices
	18. Collaborating with colleagues, parents and social services
	19. Negotiation skills (social and political interactions with multiple educational stakeholders, actors and contexts)
	20. Reflective, metacognitive, interpersonal skills for learning individually and in professional communities
	21. Adapting to educational contexts characterized by multilevel dynamics with cross-influences (from the macro level of government policies to the meso level of school contexts and the micro level of classroom and student dynamics)
Dispositions: beliefs, attitudes, values, commitment	22. Epistemological awareness (issues concerning features and historical development of subject area and its status, as related to other subject areas) 23. Teaching skills through content 24. Transferrable skills
	25. Dispositions to change, flexibility, ongoing learning and professional improvement, including study and research
	26. Commitment to promoting the learning of all students
	27. Dispositions to promote students' democratic attitudes and practices, as European citizens (including appreciation of diversity and multiculturalism)
	28. Critical attitudes to one's own teaching (examining, discussing, questioning practices)
	29. Dispositions to team-working, collaboration and networking
	30. Sense of self-efficacy

Source: European Commission (2013b)

Another important notion emphasized in this proposal is the idea of competencies as the basis for defining the learning outcomes of initial teacher education programmes, the selection criteria for teachers' recruitment and promoting teachers' lifelong learning.

Supranational standards have gradually entered the national contexts, as with Spain. Currently, for the first time in the history of Spanish education, and as suggested by the European guidelines, secondary teachers' initial education is defined in terms of competencies. The LOE was the first law to promote the definition of teachers' profile as competencies, which was later shaped up through the abovementioned Order ECI/3858/2007 for the secondary teachers' Master's degree (Manso, 2012).

The objectives explained in the previous point ought to be reached through a secondary teachers' curriculum transversally designed by eleven competencies, indicated in Section 3 under the title "Competencies". Transversal competencies regarding ordinary secondary teachers' initial education, not vocational nor from the educational psychology orientation speciality, are as follows:

1. To know the curricular contents of the subject and the appropriate teaching-learning didactics and processes.

2. To plan, develop and evaluate teaching and learning progression enhancing educational processes that facilitate the acquisition of the competencies related to the specific subject, based on the level and previous training of students as well as their orientation. These measures shall be both individual and in collaboration with other teachers and school professionals.

3. To search, to obtain, to process and to communicate information (oral, printed, audiovisual, digital or multimedia), and to transform the information into knowledge which is applied in the specific subject teaching-learning process.

4. To participate in the collective curriculum planning for a determined school; to develop and implement both group and personalized teaching methodologies adapted to the diversity of students.

5. To design and develop learning areas with special attention to equity, emotional and civic education, equal rights and opportunities for men and women, civic education and respect for human rights that facilitate life in society, decisions and building a sustainable future.

6. To acquire strategies which encourage students' effort and to enhance their capacity for autonomous learning and learning with others, and to develop thinking skills and decision-making to facilitate autonomy, confidence and personal initiative.

7. To know the processes of interaction and communication in the classroom, mastering social skills and the necessary abilities to encourage learning and coexistence in the classroom, and to address problems of discipline and conflict resolution.

8. To design and carry out formal and informal activities that help make the centre a place of participation and culture in the environment where it is located; mentor and guide students in a collaborative and coordinated manner; participate in evaluation, research and innovation in teaching and learning.

9. To know the legislation and institutional organization of the education system, and to know models of school quality improvement.

10. To understand and analyse the historical features of the teaching profession, its current situation, perspectives and interaction with the social reality of each period.

11. To inform and advise families about the process of teaching and learning and about their children's personal, academic and professional orientation.

Designing teachers' initial education according to a competencies profile offers a certain flexibility to adapt contents and learning experiences to each context. This trend also offers the possibility to cover one of the chief difficulties in education, keeping up with new knowledge, methodologies and social needs. Initial teacher education, through the development of competencies, is now being seen as the grounds for further developing a successful teaching career.

However, this career is unavoidably linked to a teaching qualification, which in turn proves two statements in the current Spanish landscape. First, as in the professionalization process explained in the theoretical framework, teachers' qualification shows a specific status including teaching as a high-level career which needs a specific body of knowledge; and second, this kind of organization situates the Spanish and European Union trends on the same page. The knowledge is being planned in terms of competencies and in accordance

with the European guidelines, which will ease better understanding and knowledge exchange among European teachers and educators.

5.2.7. SECONDARY TEACHERS' QUALIFICATIONS

Due to the low level of national flexibility regarding the academic path, secondary teachers' qualification always belongs to ISCED 7 (Master's degree, usually lasting 1 to 2 years). It is required that candidates who want to enter ISCED (in the Spanish case for secondary teachers, a 1-year Master's), should hold an ISCED 6 (Bachelor's degree) in a subject related to secondary school subjects or a degree adaptable to some subjects. These two qualifications are compulsory for both junior and senior secondary teachers.

Once the student has obtained and passed all 60 credits, a teaching qualification is granted. This qualification does not expire, and therefore there is no need to renew it or take further assessments. There is no national examination in order to acquire a teaching licence, and teachers do not have to register in any specific administration office to be allowed to teach in that region; once the qualification has been, earned teachers are allowed to teach in both private and co-funded schools. If teachers want to work in public schools, it is necessary to take a regional examination designed by each autonomous community, which recruit their own teachers. However, this assessment is not related to qualification (which must be earned before) only to teachers' selection for public institutions (not for privately funded or charter schools).

All official qualifications and degrees (undergraduates, Master's and PhD) go through a process of analysis and recognition. Once a university wants to offer a new degree, it submits an application form to the University Council, which starts the process of verification. Once ANECA (or another quality agency) accepts the degree, it is up to the autonomous community to approve it. This process is established in Royal Decree 1393/2007 which establishes the organization of official university courses. According to this Decree, official qualifications will be issued on behalf of the King by the Rector of the University (Article 3.2).

The result of the Master's is a qualification obtained in accordance with Royal Decree 1002/2010, of 5 August, which regulates the expedition of official university qualifications (MECS, 2010c). Qualifications include the name of the Master's, described as Master in

(specific denomination), with the concentration (if any) and the name of the university issuing the qualification.

5.2.8. SELECTION OF SECONDARY TEACHERS-TO-BE FOR INITIAL EDUCATION PROGRAMMES

The National Entrance Examination is not applicable for Master's level, since the minimum requisite is to hold an undergraduate diploma, and there is no national entrance examination for Master's degrees. Organic Law 6/2001 on Universities, and its modifications (mainly by an Organic Law in 2007) recognizes the autonomy of universities (Article 2) including student selection and assessment. However, this autonomy has as its limits the basic requirements determined by national legislation. Title VIII, Article 42, referring to university students' access, promotes the establishment of selection processes under the values of equality, merit and capacity.

These components are also enhanced in Royal Decree 56/2005, of 21 January (MECS, 2005) which regulates official university post-graduate studies (Master's and PhD studies). The university is named as the last responsible entity for student selection. Students should hold an undergraduate diploma, and as an exception, a university can contemplate access for students who do not hold an undergraduate degree but have passed 180 ECTS corresponding to all of the core modules of first cycle.

Order ECI/3858/2007 determines that Master's entry must depend on specific competencies accreditation (undergraduate diploma or through a specific assessment designed by the university) and a foreign language at at least B1 level. Each university complements these requisites according to their own needs, philosophies and criteria, which leads to a very flexible selective process in which universities take the main role in outlining candidates' desirable profiles.

Most universities calculate a performance grade for each student and establish, each year, a different minimum mark to enter the Master's. The components taken into account by each university can be slightly different, however processes commonly include the final grade from the undergraduate degree and language performance. University selection assessment, when students do not hold a previous undergraduate diploma related to a secondary school subject, focuses on subject knowledge at university level and regarding secondary school curriculum contents. The entrance exam is generally a written test up to 10 points and lasting

2 hours, as at the University of Oviedo[74] or University of Valladolid.[75] When students do not have an official certification in foreign language, the language assessment is also designed by each university according to the B1 level.

It is not possible to determine with certainty the average grade needed to enter secondary teachers' initial education Master's, since each university has their own scale and components, which may differ from one speciality to another and from one year to the next. Apart from some autonomous communities, such as Castilla and Leon, where all universities have agreed to follow a similar pattern for their examinations, each university enjoys their freedom to select students. Some universities may exclusively count on previous academic records and experience, such as the National University of Distance Education, whose table of minimum scores (UNED, 2013), sum up the points of academic records, having a PhD (1 extra point), having research skills (0.5 points), holding another official Master's (0.5) and obtaining the qualification which allows entrance to the Master's in a distance education modality (1 point).

Others may be more subjective, such as the University King Juan Carlos (2015) which takes into account academic performance, the student's Curriculum Vitae, work experience and motivation; or, the University of Deusto (2015), which asks for a personal essay and motivations, attitudes and values, academic record, previous post-graduate education related to the Master's, professional experience, language competency in Spanish, Basque and English, and a last interview to select the final candidates.

As for the academic grade, as before stated, the minimum grade can differ widely, even in the same autonomous community. For instance, in 2015 in Catalonia (Generalitat of Catalonia, 2015), the English teacher speciality minimum grade (minimum mark to pass any examination) went from 5 out of 10 in some universities to 7.3 in others; the concentration of geography and history ranged from 5 in Girona to 7.5 in Barcelona; and physical education fluctuated from 5 in Barcelona or Lleida to 6.5 in Vic.

The differences between the scores are remarkable when analysing the same specialties in the only university with students across the country, the National University of Distance

[74] The complete guide for entry assessment can be consulted at: http://www.uniovi.es/-/master-universitario-en-formacion-del-profesorado-de-educacion-secundaria-obligatoria-bachiller [September 22, 2015]

[75] The complete guide for entry assessment can be consulted at: http://www.uva.es/export/sites/uva/2.docencia/2.01.grados/2.01.01.pruebasdeacceso/2.01.01.01.areaestudiantes/2.01.01.01.07.masterprofesorsecundaria/index.html [September 22, 2015]

Education, and its abovementioned table of scores for academic year 2013/2014. Nonetheless it is important to take into account that the UNED table includes other components besides the undergraduate average score. Average minimum grades for entry into secondary teacher initial education in the English speciality range from 9.1 in Calatayud to a 5 in Tudela. However, all other minimum scores for this concentration are above 8, except in three areas: Balear Island (7.6), Lugo (5.4) and Tudela. In geography and history, the highest grade to enter the Master's is 8.33 in Madrid, while the lowest is 5, found in Pamplona. Most of the minimum scores range between 6 and 8. The highest grade is asked in the Greek concentration in Pamplona, where a minimum of 9.71 is required.

In light of the current circumstances, it is acceptable to affirm that teaching and secondary teachers' initial education is increasing its academic acknowledgement, which is expected to progressively reach better social appreciation. It is obvious that the situation is still far from being ideal; however, the actual legislation, which is stronger than ever and locates teachers' initial education in tertiary education programmes and in higher education institutions with plans leading to a recognized qualification, is a significant improvement.

5.3. INTERNATIONAL AND SUPRANATIONAL STANDARDS OF QUALITY FOR INITIAL TEACHER EDUCATION

National and international bodies responsible for quality standards in higher education institutions (where teacher education aims to be) are frequently independent and external organizations which can offer a homogenous and neutral assessment within all institutions of a context/nation. National organizations, as well as intergovernmental and international agencies, such as the European Commission (EC), the OECD, UNESCO or the World Bank, have shown their concern about quality measurement in education. As a result, several agencies have started to gather countries from a certain area to propose their own standards of quality.

For instance, the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), as a worldwide association, gathers together more than 200 quality assurance national organizations, of which several are Spanish or Chinese. Some of their members also belong to regional networks such as the Asia-Pacific Quality Network (APQN), of which China is a member, or the European Association for Quality Assurance in Higher Education, of which Spain is a member. These agencies are responsible for collecting, designing and disseminating quality theories and practice parameters as well as carrying out

external evaluations and theory improvement. Quality of education, as a key term of the 21st century, is taking a premier role in international and supranational standards.

For example, INQAAHE published in 2007 a document organizing quality into sections which refer to accountability, transparency, and resources: (1) institutions of higher education and quality agencies: relationship, standards, and internal reviews; (2) agencies of quality review of institutions: evaluation, decision, and appeals; and, (3) external activities: collaboration with other agencies and transnational/cross-border education. The items include aspects about governance (mandate, structure, legislation and goals), human and financial resources (budget, fees, human resources profile), and policies and assessment (quality assurance policy, systems, self-reviews, external feedback). They reports and promote public information and periodic reviews, collaboration and cross-border higher education.

Also, addressing this topic, UNESCO and OECD published a proposal on quality guidelines for higher education (2005). These international organizations were concerned about reaching quality through sharing good practices, internal quality management systems, recognition of quality teaching and research, financial status and provision of qualifications. The same year, 2005, ENQA released a document addressing standards and guidelines for quality in the European Higher Education Area (ENQA, 2014), and three years later, APQN addressed the same topic in higher education in the Asia-Pacific region (APQN, 2008), called the Chiba Principles. Both documents associated higher education quality with clearly defined goals and objectives, human and financial resources, and documentation that states standards, methods, processes and decision criteria, among others.

One year later, in 2009, the UNESCO World Conference on Higher Education took place in Paris. As a result, some strategies for all Member States and future guidelines for UNESCO itself were proposed. General suggestions to pursue a high quality level included developing more flexible entry pathways, recognising prior learning and work experience, increasing investment in higher education, strengthening appropriate quality assurance systems, etc.

Specifically referring to teachers, UNESCO's World Conference granted that, "Higher education must scale up teacher education, both pre-service and in-service, with curricula that equip teachers to provide individuals with the knowledge and skills they need in the twenty-first century. This will require new approaches, including open and distance learning (ODL) and information and communications technologies (ICTs)" (UNESCO, 2009, p. 3).

The OECD also focused on teacher education when delimiting specific parameters. The education indicators research, *Education at a Glance*, released for the first time in 1998, categorizes quality components based on the demographic, social and economic context of education, financial and human resources, access to education, participation and progression, transition from school to work, the learning environment and the organization of schools, student achievement and the social and labour market outcomes.

Only two years after the beginning of this initiative, in 2000, *Education at a Glance* included a section regarding "Pre-Service Training Requirements for New Teachers", which have been progressively developed until the current "What Does it Take to Become a Teacher?" in *Education at a Glance* 2014 (OECD, 2014a). This parameter is subdivided into seven items: initial teacher education and entry into the profession for pre-primary education, primary education, lower secondary education and upper secondary education, requirements to enter and progress in initial teacher education for lower secondary education, content of initial teacher education for lower secondary education and entry into the teaching profession for lower secondary education.

Some of the standards selected by the OECD to describe initial teacher education have already been explained during this chapter, namely selection into and during initial teacher education, initial teacher education length and organization (pathways), decision-making on initial teacher education programmes, teachers' initial education contents, teacher education attainment, requirements for entering the teaching profession and alternative pathways.

For the purpose of this study, some indicators extracted from supranational policies related to initial teacher education, have been summed and organized in Table 5.16, around the comparison categories of this study. These guidelines are based on initial teacher education practices considered to be constructive and of high quality, encompassing suggestions according to the current economic and political contexts of both countries.

The OECD has a highly representative role in this section, since, "The OECD has become a kind of global 'benchmarker of standards' and in this way also a power in educational decision-making and governance. This power had earlier been concentrated in nation-states, but now, to a certain extent, it has been diffused to the OECD as well as to other supranational organisations, such as EU" (Rinne, 2008, p. 668). In addition, guidelines from documents by UNESCO, UNICEF and the World Bank, among others, complement

the OECD proposals . All of them aim to globally improve teachers' initial education and to analyse good practices detected in national contexts, and are considered to have good results.

Regarding general features, the supranational guidelines urge countries to conceive teachers' initial education as the foundation for future in-service training (UNESCO, 2014a), and as the entry point for the profession and the platform for teachers' development (OECD, 2001b), hence the pertinence of developing a coherent transition among all stages of teachers' professional development. The supranational guidelines highlight that initial teacher education, induction and professional development must be consistently organized to create a lifelong learning framework for teachers (Schleicher, 2011).

To reach this cohesion, it is essential to design teachers' profiles that reflect the school's learning objectives as well as to establish a clear notion of teachers' responsibilities and what is considered as "accomplished teaching" (Schleicher, 2011). Simultaneously, this type of strategy, in which there is a strong consistency between teacher education and professional levels, can tackle two purposes.

On one hand, it improves teachers' self-image of their work, understanding of the professional meaning of a teaching career when entering the first step and the compromise and importance of them as role models for students (OECD, 2011). On the other, the system can "promote mobility of teachers across educational levels by ensuring that different teacher education programmes have more elements in common and by providing more opportunities for retraining and upgrading teachers' skills" (OECD, 2011, p. 9).

However, this progression and compromise from teachers and institutions would be difficult to achieve if not complemented by other general strategies which also increase teachers' status. For instance, the supranational suggestions highly recommend to "Build stronger links between schools and the community", "Enhance the image of teaching through general campaigns in the media" and "Develop special programmes and incentives to attract subject specialist teachers" (OECD, 2011, p. 9),

General initiatives are later reflected in specific guidelines directly addressing teachers' initial education. The indicators chosen for this research to analyse the trends of national realities as part of globalized contexts are based on a selection of international standards, according to their relevance and accessibility. The indicators are taken form Schleicher (2011), OECD (2011), UNESCO (2015), and UNESCO, UNICEF, World Bank, UNFPA, UNDP,

UN Women and UNHCR (2015), and are organized according to the comparative categories of this thesis. The organization is as follows:

Table 5.16: Teachers' initial education international guidelines for quality

Institutions and paths	- Programmes need to be well-funded through sustainable channels. External assistance cannot be over-emphasized. - More flexible structures of initial teacher education can be effective in opening up new routes into the teaching career, without compromising the rigour of traditional routes. - Provide part-time study or distance learning. - Provide consecutive or post-graduate programmes of teacher education to give opportunities to train as a teacher after having completed studies in another field. - Increase the common components of teachers' preparation for different types of school and levels of education to increase opportunities for working in different schools. - Improve partnerships between teacher education institutions and schools in order to provide teacher trainees with a more integrated experience. - Offer opportunities to move into other courses if trainee teachers' motivation towards teaching changes.
Curriculum design	<u>General curriculum</u>: - Move initial teacher education programmes towards a model based less on academic preparation and more on preparing professionals for school settings, with an appropriate balance between theory and practice. - Re-orientate initial teacher education to respond to challenging classroom conditions from a diverse array of backgrounds. Curriculum should prepare teachers for challenging contexts such as bi- or multilingual teaching, large classes, multigrade classes and limited resources.

	- Place more emphasis on developing the capacity of teachers in training to diagnose student problems swiftly and accurately and to draw from a wide repertoire of possible solutions those that are appropriate to the diagnosis. - Initial education programmes should prepare teachers for inclusive education, eliminating gender stereotypes and promoting equality, non-discrimination and human rights and fostering intercultural education. - Teachers should manage ICTs and social networks. - Ensure that initial teacher education combines strong content knowledge with skills for reflective practice and research on the job. Initial teacher education must focus on effective teaching methods for learning. - Pedagogy courses may have a strong emphasis on using research based on state-of-the-art practice. <u>Practicum</u>: - Initial education should go beyond theory of teaching and include practical classroom experience. - Programmes where teachers get into classrooms earlier and spend more time there. Student teachers get more and better support in the process. - Ensure that students' field experiences and academic studies reinforce and complement each other. - More than a year teaching in a designated school, associated with the university, during which time the teacher is expected to develop and pilot innovative practices and undertake research on learning and teaching. - Ensure that mentor teachers receive appropriate training and support, including time allowances.
Professional competencies	- Clear and concise profiles of what teachers are expected to know and be able to do in specific subject areas.

	- Teacher education should seek to develop the skills for reflective practice and on-the-job research. - Provide teachers with the research skills needed to enable them to improve their practice in systematic ways. - Ensure that the teacher profile encompasses strong subject matter knowledge, pedagogical skills, the capacity to work effectively with a wide range of students and colleagues, contribution to the school and the wider profession and the capacity to continue developing.
Qualifications	- National qualifications frameworks for teachers in each level. - Teachers' profiles can guide initial teacher education and teacher qualification. - Consider accreditation by an independent agency to assure quality in teacher education. - Ensure that qualification of teachers includes subject matter knowledge, pedagogical skills, communication skills, experience and personal qualities. - Enable appropriately qualified entrants, including mature student teacher trainees, to start working and earning a salary before acquiring teacher education qualifications. - Establish a mandatory probationary period of one to two years of teaching before a full teaching qualification or permanent teaching post is awarded. - Give credit for significant qualifications and experience.
Teachers-to-be selection	- Move the system in which teachers are trained to a relatively smaller number of university-based teacher education colleges with relatively high entrance standards and relatively high status in the university. - Enter teacher education programmes knowing enough about the subject (consecutive models). - Establish procedures to assess whether individuals wanting to become teachers have the necessary motivation, skills, knowledge, and personal qualities.

	- Increase status of teachers and offer an attractive career path to attract better candidates.

Source: Researcher's original compilation from Schleicher (2011), OECD (2011), UNESCO (2015), and UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR (2015)

5.4. SUMMARY OF THE CHAPTER

This chapter is divided into three sections, teachers' initial education in China, in Spain and supranational guidelines. Each national section began by reviewing the history and development of teachers' initial education in the country during the last century, as a requisite for understanding the current national policies, dilemmas and future agendas. These subsections' objective is to place the current models and systems under a time-evolvement perspective, and to understand future routes and goals. Once this progression has been elucidated, the contemporary legislation and programmes of each country are detailed, identifying the factors influencing the implementation of each system: institutions and paths, curriculum design, professional competencies, qualifications and student selection. The last section exposes and organizes supranational proposals of quality in these same categories.

In general, this chapter highlights the progression of both countries during the last era from low to high interest in secondary teaches' initial education, and how globalization has had a certain impact on the academic structures preparing teachers. The sections describe how the path towards quality has followed modern trends in having elements with an impact on teachers' quality, attraction and retention. In addition, both systems maintain their autonomy and show a certain degree of disparity, in China, even within its own territory. In that viewpoint, supranational standards and criteria play an important role to discern good practices and promote reflection in education.

The next chapter discusses the divergences and convergences between these systems and compared with the supranational agendas.

CHAPTER 6

JUXTAPOSITION AND COMPARISON: GENERAL FEATURES

According to the comparative method, the next section covers the stages of juxtaposition and comparison after framing and describing the general Chinese and Spanish data. The goal of this chapter is to detect possible trends, convergences and divergences between both countries and to help understand the next chapter which centres on secondary teachers' initial education system. Convergences and divergences are shown in tables and charts as a way to summarize and compare the information exposed in the phase of description and interpretation, and resulting from the parameters chosen for this research, explained in the methodology chapter. Each of the following sections integrates information from preceding chapters as a way to understand the practical meaning of the data. At the end of each title is a code showing the comparison category (CC) and parameter (P), as explained in the methodology.

6.1. TERRITORIAL, SOCIO-POLITICAL AND ECONOMIC FEATURES (CC. 1)

It is undeniable that the indicators showed in this category, synthesized in Tables 6.1 and 6.2, bring to light deep divergences between China and Spain. These parameters have been chosen as a way to appreciate both countries under a current and comprehensive approach.

The general territorial, social, economic and political information complement the study with a framework in which understands educative policies, and the comprehension of the worries and eases of each country. As recalled by Arnove, international approaches offer several benefits from exclusively using the nation-state as the unit of analysis, such as the possibility to analyse education immersed in a context of international economic, political and social development (Arnove, 1996, cited in Welch, 2003). In this regard, as supporting features to this section, many references are made to Chapter 4 in which data and the corresponding sources were cited.

6.1.1. TERRITORIAL AND SOCIO-POLITICAL FEATURES (P. 1)

Certain misunderstandings among countries are often connected to a lack of empathy when assessing other countries' difficulties and needs. The complexity of understanding certain countries, like China, are mainly related to territorial extension and social and political organization. From smaller countries' point of view, it is challenging to imagine such a complex and centralized organization, or even to conceive of such large cities and basic social requirements. At the same time, from such a large country's point of view, with its rigid social, political and economic organization, it is unlikely to share the European philosophy in which countries like Spain transfer certain national powers to a supranational organization, somehow losing control over their own territory.

Each country has complex and exclusive characteristics that are the product of their own history and culture and, in turn, related to their geopolitical situation. These characteristics are constantly changing, and changes are no longer exclusive to a nation but may have impacts in the international field. Due to globalization, countries' fluctuations are affected by other countries and affect, in turn, local and national realities. Though the confrontation between Axis powers and Allies during World War II had a deep impact on today's geopolitical and social organization, in both Europe and Asia, real and practical differences have almost vanished in certain areas, such as economics, and strongly remained in others, such as religion, policy organization or philosophies. In this sense, economics is setting the pace for globalization to bring countries closer, but each country has to deal with different realities. The juxtaposition of China and Spain regarding these realities is shown in Table 6.1.

Table 6.1: China-Spain territorial and socio-political features

Indicators	China	Spain
Area	East Asia	Southwest Europe
Political system	Socialism with Chinese characteristics (Communist Party) Highly centralized system	Parliamentary monarchy (democracy) Decentralized system
Capital	Beijing	Madrid
Territorial extension	9,600,000 km²	505,990.7 km²
Territorial distribution	Provinces (23) Autonomous regions (5) Municipalities (4) Special administrative regions (2)	Autonomous communities (17) Autonomous cities (2)
Border countries	14	4
Population	1,360,720,000	46,771,341
% population in rural areas	46.3%	22.3%
Languages	Mandarin (several dialects)	Spanish and co-official languages: Catalan, Galician, Basque
Religions/philosophies	No official religion. Atheist/unaffiliated (52.2%) Folk religion (21.9%) Buddhist (18.2%) Christian (5.1%) Muslim (1.8%) Other religion (< .1%)	No official religion. Catholic (67.8%) Non-religious/atheist (27.6%), Other religion (2.3%) Not stated (2.3%)
Life expectancy	75.3	82.1
Human Development Index (2014)	0.719-High	0.869-Very high

Source: Researcher's original compilation from UNDP (2014), The World Bank, The World Factbook, and national data cited in Sections 4.1.1 and 4.2.1

It is necessary to remark that national policies in China affect a territory 19 times larger than those in Spain; approximately twice the area of the European Union (4,422,773 km²). The European Union (503,679,730) has the third largest population of the world, only behind China (1,360,720,000) and India (1,251,695,584). Still, Chinese inhabitants number double the number of citizens of the European Union and the Chinese population is around 29 times larger than the population of Spain. It goes without question that educating high-

quality teachers for such a large territory and for all Chinese, in rural and urban areas, has its challenges and needs.

Bearing in mind these facts, it is essential to avoid, as much as possible, information bias which could lead to a lack of general understanding. As one Chinese historian puts it, "We feel that much of the misunderstanding which exists between us and Europeans derives from Europe's difficulty in grasping the scale of what we are undertaking in our national modernization, and thus the scale of the obstacles we have to overcome" (Chinese historian, n.d., cited in Lisbonne-de Vergeron, 2007, p. 41).

Not only the extension, but also the geolocation of each country has a strong impact in education policies and societies. China is compelled to directly interact and organize its borders along 14 countries, 10 more than Spain. It is located in the middle of all the major Asian trade routes and its "geography has been fundamental in shaping its five thousand years of economic history and influencing settlement patterns" (Huang, Y., 2010). On the other side, Spain is located in a 'corner' of Europe and its territorial position has obliged the country to have a direct relationship only with 4 other nations. For years most of Spain's trade was routed by sea and the Spanish relationship with Europe was scarce.

Conversely, in both countries, the cultural exchange has not been as enriching as it could have been since, for a period, both were closed to international interactions. They were, almost simultaneously, going through a civil war and a subsequent social, political and economic crisis situation with no external intervention, and a subsequent slow recovery. This situation progressively changed in China and Spain. Spain became a European Union member and thanks to European economic programmes and to the EHEA and its social exchange programmes, educative relationships became more fluent. Almost concurrently, China started several openness policies, which led to numerous educative exchanges, mainly with Asian countries (especially Korea and Japan). These exchange programmes have been further detailed in Section 4.1 for China and Section 4.2 for Spain.

Political organization is one of the most characteristic and divergent aspects of the study. The Chinese Government has to manage 34 political areas with different statuses and grades of autonomy. A similar situation, but on a smaller level, is handled through a parliamentary monarchy by the Spanish government in 17 autonomous regions and 2 autonomous cities. Logically, as a consequence of these facts, the national educative legislation (Sections 4.1.5.1 and 4.2.5.1) strongly differs between China and Spain. Intrinsic and explicit values are in

compliance with the countries' political views and organization. While Chinese legislation encourages ethics and principles along the Chinese Communist Party morals and values, Marxism-Leninism and Mao's philosophies, through a highly centralized system, Spanish legislation is influenced by values of democracy, coexistence and basic human rights and freedoms, under a decentralized system.

In addition, large territories with several regions and types of organization often come with high cultural disparity. However, the attention of each country to the matter of diversity is not focused on exactly the same aspects. In contrast to what is happening in China, where rural and ethnic minorities' education is one of the government's main concerns, Spanish policies are concentrated on co-official languages and religion.

Chinese inhabitants living in rural areas (twice the percentage of Spain), include most of the people belonging to ethnic minorities, while most Han Chinese live in urban areas where access to and resources for education are considerable higher. Due to this imbalance, Chinese education policies and efforts are currently centring on students from minority groups and living in rural areas. In the case of Spain, rural or ethnic minority education is not at the forefront. On one side, ethnic minorities live in cities and share the same public schools as any Spaniard. On the other, the rural population represents half the percentage of China's and the disparity between rural and urban schools and resources is negligible.

In China, the official language for all the provinces is Mandarin but, by law, ethnic schools are allowed to have ethnic-langue speaker teachers and to use their languages in the classroom, mainly during the first years. The main concern in most of these areas does not focus on the language but on the fact that students have enough schools, teachers, and opportunities to keep studying after compulsory education. In Spain, as explained in Section 4.2.5.4, a percentage of classes can be taught in the co-official language. The distribution of these co-official languages (Catalan, Galician, and Basque) in the curriculum has historically been, and still is, one of the chief battles between autonomous communities and the central government and its general curriculum proposal.

The last divergence found in these indicators is that Chinese schools do not link education and religion in any way, since religion is considered to be a private matter. Chinese social values are traditionally linked to Confucianism and Taoism as moral codes, and to communism as a political philosophy, but official programmes do not include any reference to religions. The difference in languages and religions or philosophies are not a main issue in

today's Chinese education policies. On the contrary, in Spain, along with language, education disagreement between different parties is often related to the maintenance, reduction or removal of Catholic religion classes in schools. Spain has a history of unification of education and religion, which provokes intense debate protected by two constitutional statements: the fact that the country is not officially linked to any religious beliefs and the right of families to choose their children's education. Traits of the inheritance of this history, as well as the power of the Catholic Church, can be found in Spanish schools where religion is not compulsory but must be offered by schools from primary to senior secondary education (as shown in Section 4.2.5.4).

The next parameters centre on the economy as a fundamental topic in developing educative policies and dealing with these social characteristics. However, economic data by itself does not show the real situation of the majority of the inhabitants in a country, since other factors, such as standards of living and health, must be taken into account. In this case, taking the Human Development Index, both countries have good general standards, higher in Spain than in China, which is also perceptible in the life expectancy, seven years longer in the European country.

Nevertheless, in this aspect, China's uneven standards among its vast rural area and large cities contribute to create perceptible differences. On one side, rural areas benefit from more natural and healthy environments, with less pollution and stress, but with lower quality services, since best hospitals or universities are located in large cities. On the other, large cities have better access to health care, universities and modern transportation systems, but often suffer from high levels of stress and pollution, such as Beijing and Shanghai. In this matter, China is a country of contrasts and has to be understood as a giant trying to grow not only on the outside, but mainly on the inside.

6.1.2. ECONOMIC FEATURES (P. 2)

The economy is one of the leading factors determining education in a country: developed countries have higher rates of school attendance and literacy. When wealth is well-distributed and not concentrated in one small sector of society, the relationship between economy and education of the population strengthens. More details about the economic situation are shown in Table 6.2.

Table 6.2: China-Spain economic features

Indicators	China	Spain
Currency	Yuan/RMB/¥ (CNY)	Euro/€ (EUR)
GDP (PPP) progression from 2002 and 2012	US$4,520 to US$15,154 billion	US$1,061 to US$1,485 billion
GDP per capita (PPP) (year)	US$9,800	US$30,100
Average net salary (month)	US$656	US$2,026
Minimum salary (month)	US$167-US$296	US$843
Labour force	797.6 million	23.2 million
Unemployment rate	4.1%	26.3%
Poverty line (year)	US$374	US$9,048
% population below poverty line	6.1%	21.1%

Source: Researcher's compilation from The World Bank, The World Factbook, Global Asia, and national data cited in sections 4.1.1 and 4.2.1

The integration of these countries into the international field has progressively directed their economies and life quality to higher standards, while not still even. Spain changed its currency to the Euro and become part of the common market in the European Union, one of the strongest economies of the world. The entry of Spain into the European Union has been one of the main modernization engines it has experienced (Malo de Molina, 2001). China also experienced astonishing economic growth, and "In two decades of market-oriented reforms, China has been one of the world's fastest-growing economies with per capita real incomes more than quadrupling since 1978" (Demurger, 2001, p. 95).

China kept growing its economy and soon became a world power thanks to one of the biggest labour forces in the world (more than 34 times the Spanish labour force), their openness policies and the promotion of exportation. China's GDP (PPP) is 10 times higher than Spain's; but, having a population 29 times larger, the income real distribution among Chinese inhabitants is considerably lower, less than one third of the Spanish quantity. Still, Spanish GDP per capita (PPP) is slightly below the average in the European Union (US$36,317 in 2014 according to the World Bank).

One of the consequences of this difference in the GDP per capita (PPP) is that China's poverty line is estimated to be lower than Spanish's. The Spanish poverty line is 24 times higher. Still, in this scenario, there are two disquieting facts regarding the Spanish relationship between society and economy: the percentage of the population living below the poverty line

is three times lower in China than in Spain, and the unemployment rate is six times higher in Spain than in Chinese society.

The relationship between employment and education is widely accepted; as Darling-Hammond notes, standards of learning are now higher than ever and workers need knowledge and skills to succeed, hence "Education is increasingly important to the success of both individuals and nations, and growing evidence demonstrates that—among all educational resources—teachers' abilities are especially crucial contributors to students' learning" (Darling-Hammond, 2006, p. 1). However, both countries are now facing a new situation: high unemployment rates among new graduates. Around 15% of tertiary graduates in both countries are jobless (OECD, 2014a; Sharma, 2014).

The average and minimum salaries are tackled again in the section covering teachers' circumstances, since these two indicators contribute to understand teachers' real working conditions. The average salary maintains the three-times correlation found in the GDP per capita, being three times higher in Spain. In contrast, the minimum salary shows greater variances, being between 2.8 and 5 times higher in Spain, depending on the Chinese region. This difference is justified by the inequality in per capita income between coastal and interior provinces (Chen, B. and Feng, Y., 2000; Demurger, 2001) and, again, illustrates the inequity of Chinese society between regions.

Although the Spanish system is not as centralized as the Chinese one, the European country does not have such differences among autonomous regions. This fact is, partially explainable by Spain's smaller size and population, and to the economic support offered by the European Union after the Civil War. Becoming a member of the EU helped the country to overcome more than 30 years of being stalled in all fields, including the economy and culture.

6.2. SYSTEM OVERVIEW (CC. 2)

The preceding comparison category, territorial, socio-political and economic features, has a significant impact on educational institutions and policies, as well as a substantial weight in the understanding of this section, which aims to uncover convergences and divergences in the general education systems. This section contributes to setting the background to answer a basic question: for what kind of system are we designing teacher education? The tables and charts of this section display the China-Spain data referring to economic,

organizational, management, structural and practical indicators of the educative system. The data was mainly extracted from national legislation and sources looked at in depth in Sections 4.1.5 and 4.2.5.

6.2.1. EDUCATION SYSTEM STRUCTURE AND ORGANIZATION (P. 3)

Education systems are a reflection of society's organization, priorities and view of the world. For instance, conceiving each stage of development as useful for confronting certain areas of reality and knowledge shows societies' notion of basic education or how schools' organization is later transmitted to the whole of society. For example, an educative system strongly based on achievements, such as the Chinese one, is an echo of the Chinese meritocracy. A system where compulsory education is longer, such as in Spain, implies a certain social conception not only of the minimum age to drop out of education, but of the proper age to enter the working environment. The organization of the Chinese and Spanish education systems is displayed in Table 6.3.

Table 6.3: China-Spain structure and organization of education systems

Indicators	China	Spain
General educative system organization	Early childhood education (0-6) Primary education (6-11/12) Junior secondary education (11/12-15) Senior secondary (15-18) Higher education (18+)	Early childhood education (0-6) Primary education (6-12) Junior secondary education (12-16) Senior secondary (16-18) Higher education (18+)
Compulsory education length (years)	9 (from 6 to 15)	10 (from 6 to 16)
Secondary school structure	Junior 3 or 4 years (11/12-15) Senior 3 years (15-18)	Junior 4 years (12-16) Senior 2 years (16-18)
Secondary level character	Junior: compulsory and free Senior: non-compulsory	Junior: compulsory and free Senior: non-compulsory
Number of significant exams until university stage	2-4 (junior diploma, senior entrance, senior diploma, university entrance examination)	2 (at the end of junior and senior secondary education)

Source: Researcher's original compilation from MOE (1986, 1995a), MECS (2006a) and other national legislation cited in Sections 4.1.5 and 4.2.5

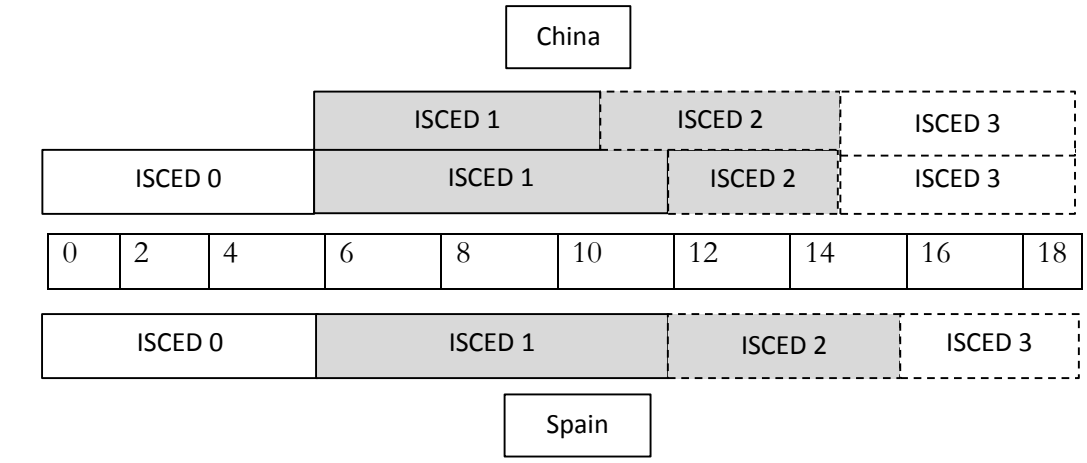
In general terms, strictly analysing the educative system organization, both appear to be rather similar. The internal division of the system into 5 levels is shared and the ages for each level are alike. However, taking a deeper look it is noticeable that these appearances hide two great differences.

The first is related to the internal organization between primary and junior secondary school and the autonomy of each province. While it is true that the Chinese system is much more centralized than the Spanish one, the Chinese provinces show greater differences in the length of these two stages (5+4 or 6+3)., Being in one or the other system does not have long-term consequences for students, since the final length of compulsory education is the same. Though contents and final length are equivalent, flexibility in internal organization is somewhat allowed, according to the directives expressed by the Chinese Ministry of Education. However, this flexibility does change the pressure and age at which some children obtain, at least, primary education certification.

This is especially important for children living in rural areas, where dropout rates are considerably higher than in urban areas and can reach, according to the Rural Education Action Programme, 25% in junior secondary schools and 60% in senior secondary school (Loveless, 2013). In Spain, school dropout is also a dilemma to tackle. According to data published by the Ministry of Education (2014a), 23.6% of students, the highest percentage in the European Union and almost double the average (12%) among the 28 countries, do not finish senior secondary education or other equivalent education.

The second characteristic concerns the one year's difference in the length of compulsory education and, therefore, the length of senior secondary education. Chinese compulsory education is conceived as a 9-year period, while the Spanish is one year longer. As a result, senior secondary education (neither free nor compulsory in any of these countries, but predominantly aiming to prepare students for the university entrance examination or vocational education) lasts three years in China, one more than in Spain. These differences are displayed in Figure 6.1.

Figure 6.1: China-Spain systems of general education



Key:

Compulsory and free

Secondary education

Source: Researcher's original work from MOE (1996a), MECS (2006a) and national legislation cited in Sections 4.1.5 and 4.2.5

Alongside this indicator it is essential to highlight that in China, entrance to a senior secondary school cannot be taken for granted. Before entering a high education institution Chinese students sit between 2 and 4 exams (junior graduation exam, senior school entrance exam, senior graduation exam and university entrance exam), the same number as Spanish students in the most similar situation (junior secondary final examination and senior secondary final examination, according to LOMCE), double in the most different.

These elements are far from being trivial for this study. Secondary teachers in both countries have to deal with children in compulsory education as well as in post-compulsory education, with completely different motivations, educative contexts and objectives. To complement this idea, more details about secondary school structures are addressed in the next parameter, where other divergences between compulsory and post-compulsory education arise when analysing the enrolment rate in each stage.

6.2.2. EDUCATION ENROLMENT DATA (P. 4)

This parameter is a reflection of one of the divergences between the Asian and the European country. The difference is not highly noticeable in compulsory education, where both countries reach near-full enrolment rates (slightly lower in China); but, in senior

secondary education, Spanish enrolment is between 5% (2nd year) and 10% (1st year) higher than in China. The concrete juxtaposition is presented in Table 6.4.

Table 6.4: China-Spain education enrolment data

Indicators	China	Spain
Primary education enrolment rate (net)	99.71%	100%
Junior secondary education enrolment rate (net)	98.6%	100%
Senior secondary education enrolment rate (gross)	86%	96.7% (1st year) 91.1% (2nd year)

Source: Researcher's original compilation from National Bureau of Statistics of China (2014) and MECS (2014c)

The most surprising data is the lack of 1.4% of Chinese students in junior secondary education, since this level is part of compulsory education. However, as happened in other fields explained in previous parameters, the economic and working needs of families in rural areas are different from those of families in large cities. Low-resource families sometimes need children to drop out before the end of junior secondary education and start working, even when forbidden by law. This happens mainly if students are not eligible to earn a scholarship and parents cannot support the expenses of the next level. At the same time, families moving to large cities or breaking the one-child-policy have difficulties getting included in the Hukou system (a registration system which allows access to social services, including education) of the city. With the Hukou system, the Chinese authorities are trying to deal with migration difficulties and control the exodus from rural to urban areas. As a consequence, due to both Hukou limitations and their parents' transfer to other cities, numerous migrant children struggle to attend school and sometimes do not appear in statistics.

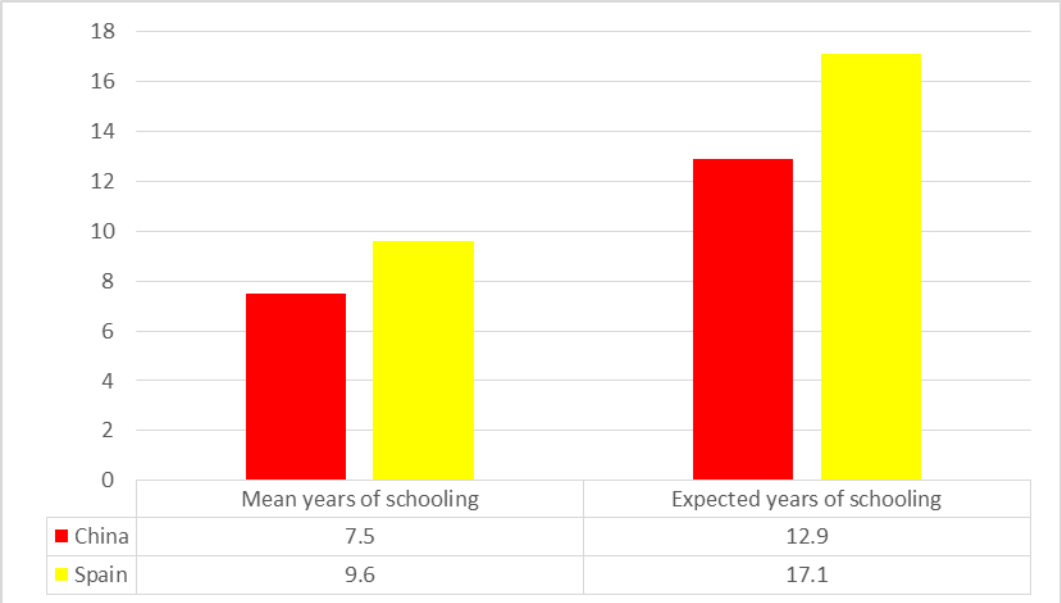
This situation is hardly reflected in Spain, where there are neither such large rural areas, hence not such a strong rural exodus, nor birth-control policies. However, a similar exodus has taken place in Spain, mainly during the Industrial Revolution. At that time, peasants from small towns moved to big cities such as Madrid and Barcelona, and children suffered from their family's relocation. Often, during that period, children did not attend school or did not finish compulsory education. It seems that, in this aspect, China is now taking a road which

Spain took not so long ago, and is making efforts to expand compulsory education to all children.

Regarding senior secondary education, there are several causes for this disparity between the countries, and one of the major reasons for the lower percentage in China is the economic impact in families from rural areas and/or low income. On one side, some families' needs and priorities urge children to work. As a result, some adolescents start working in low-skilled factory work or small family businesses right after compulsory education. On the other, secondary schools can be expensive for the family budget and far from the family house, adding extra costs for transport and even requiring a boarding school if the children want to, and can (there are several scholarships for outstanding students), enter a 'high-level or key' high school. These cases stress the strict and highly competitive selection processes.

Despite the economic difficulties of families, students' dropout rates and internal-national differences, great efforts from families and countries have led to a positive convergence, shared by both countries: compulsory education is being surpassed for most of the population, improving the attendance rate from previous generations. The mean years of schooling are still 2 years longer in Spain than in China, as displayed in Chart 6.1:

Chart 6.1: China-Spain mean and expected years of schooling



Source: Researcher's original work from UNDP (2014)

Length of compulsory education is, at the present time, being largely surpassed in both countries by most of the population. In China, the expected years of schooling[76] is 4 years longer than the compulsory education, while in Spain it is 7 years longer. Schooling expectation is four years longer in Spain than in China, but the actual data already confirm, in both countries, a big advance compared to previous generations. This progression endorses the fact that both countries are following a similar path to improve their society's education, though China still remains a little behind.

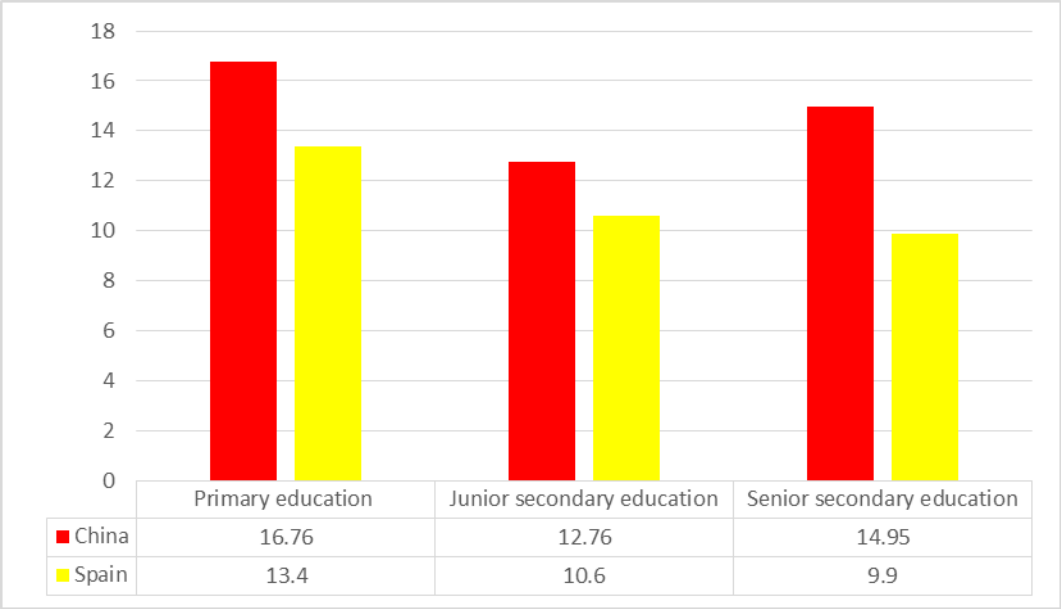
In China, according to the UNDP (2014), the population aged 25 and older attended one and a half years less than the actual length of compulsory education and five years less than the actual expected years of schooling. Chinese citizens older than 25 years old attended school for two years less than Spanish citizens in the same age group. On the other hand, the previous Spanish generation attended school for half a year less than the actual length of compulsory education and seven and a half years less than what is expected for current generations.

Still, Spanish transmission of education is evolving very slowly compared to other European Union members, and students at both extremes (regarding family education) tend to maintain their parents' educative levels. According to Eurostat (2013), 50% of students who come from families with low levels of education persist at that level, while 75% of students with a high level of education in their families also persist at the same level. The only perceptible movement is found from medium to high level in 52% of students.

Both the enrolment rate and the resources allocated to education from the families and the country are two important indicators with great impact on the student-teacher ratio. Nowadays the Chinese student-teacher ratio is higher than the Spanish by around 3 students in compulsory education and 5 students in senior secondary education, as shown in Chart 6.2.

[76] According to the UNDP definition, these data refer to the number of years of schooling that a child of school entrance age can expect to receive if prevailing patterns of age-specific enrolment rates persist throughout the child's life.

Chart 6.2: China-Spain student-teacher ratio at each level



Source: Researcher's original compilation from MOE (2013b), National Bureau of Statistics of China (2014) and MECS (2014a)

These data are probably more accurate for Spanish schools than for Chinese. In China, the abovementioned disparity among regions has led to a great disproportion between urban and rural areas. According to the OECD, Chinese classes' average size is 30 students in primary school and more than 50 in junior secondary education, while Spain has nine fewer in primary school (21 students) and 26 fewer in junior secondary education (24 students). In both countries, the average class size is larger in private than public institutions by four or more students (OECD, 2014a).

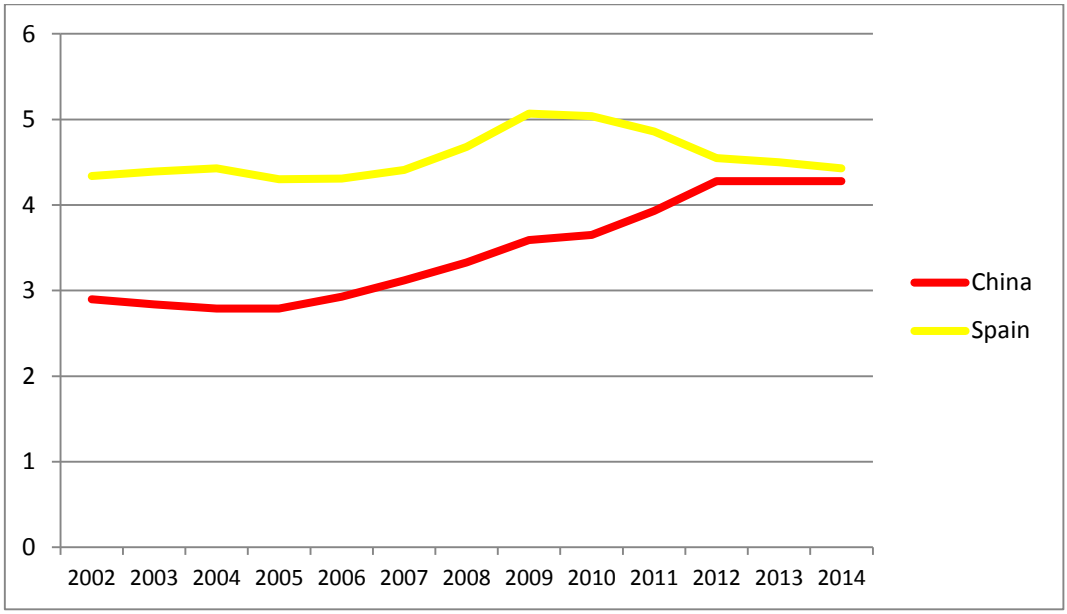
Chinese national data confirm this inequality between urban and rural areas which confirms the fact that expanding all levels of education in such a large population takes time and resources. Chinese urban areas and Spain's average have similar student-teacher ratios, such as Beijing, where the primary school ratio is 14.36 students per teacher, going down to 9.75 and 9 in junior and senior secondary education, respectively. On the other hand, rural ratios can reach almost 20 students in one class in primary school in provinces such as Jiangxi (19.70), Guangxi (19.77) and Guizhou (18.43). These provinces also have higher ratios in junior secondary (14.44 in Jiangxi, 16.68 in Guangxi and 18.23 in Guizhou) and senior secondary (17.62 in Jiangxi, 17.52 in Guangxi and 18.25 in Guizhou) education (National Bureau of Statistics of China, 2014).

This disproportion is not found in Spain where, on average, the main difference is three students, from 10.1 students per teacher in Galicia to 13.4 in Madrid (MECS, 2014c). Paradoxically, the proportion in Spain is inverted from that of China, and rural areas have lower student-teacher ratios than urban areas.

6.2.3. ECONOMY AND EDUCATION (P. 5)

It is evident that both countries have progressively expanded their average attendance length and enrolment rate and lowered their student-teacher ratio. As said before, this has been possible, among other factors, because of the resources put into education. Spanish and Chinese investment in education, related to each country GDP, is shown in Chart 6.3.

Chart 6.3: 12-year progression in Chinese and Spanish GDP investment in education



Source: Researcher's original compilation from National Bureau of Statistics of China (2014) and MECS (2014a)

The current expenditure, correlated to each country's GDP, almost matched in 2014; China invested 4.28% and Spain only 0.15% more. In this parameter, the growth path shows very clearly the effort made by the Chinese government to improve education, not so obvious in the Spanish context where the starting point was drastically different. China raised its percentage for education by 1.38% in the last decade (from 2002 to 2014); Spain had almost no changes, since in 2004 its GDP percentage dedicated to education was already 4.43%. In Spain, the fluctuations during that decade are between a minimum of 4.25% (2014) and a maximum of 5.07% (2011).

The evolution, however, shows a growing tendency in Chinese progression since 2004 but a decreasing tendency in Spain since 2009. Since 2012, when China started to spend more than 4% on education, the paths of both countries got close, and have kept approaching until today. The economic crisis in Spain, in contrast to the economy and stable growth in China, has had some effects on social expenditure. According to the Spanish National Institute of Statistics, Spain suffered two recessions, from 2008 to 2010 and from 2011 to 2013. While during the first period, the investment in education progressively declined, in the second period, education expenditure suffered a drastic cut. Economic resources are allocated according to certain characteristics of schools, as displayed in Table 6.5.

Table 6.5: China-Spain national economy and investment in education

Indicators	China	Spain
Education budget - GDP (2014)	4.28%	4.43%
Type of school (public, private, co-funded)	Public Private Mixed-funded	Public Private Co-funded/private
Source of funding (banks, religions organizations, etc.)	Wealthy Chinese. Foreign institutions with western-orientated education.	Religious organizations. Cooperatives. Foreign institutions.

Source: Researcher's original compilation from National Bureau of Statistics of China (2014), MECS (2014a) and national legislation cited in Sections 4.1.1, 4.1.5, 4.2.1 and 4.2.5

Expenses in education are distributed according to each country's philosophy, and it is in this indicator where we can find a manifest variance. While China has two kinds of institution, public and private, Spain allocates part of public resources to private institutions, the already explained co-funded/private institutions. These schools are managed by private entities but are obliged to follow public legislation and should not charge extra taxes. Nonetheless, as Samoff warns, "Economic crisis and structural adjustments focus attention on reducing government expenditures. Often, the focus on spending less, ostensibly to use resources more efficiently, effectively, and equitably, becomes an end in itself, obscuring important objectives and rearranging priorities" (Samoff, 2003, p. 65).

As a result, through private and co-funded/private institutions, (in both countries but mainly in Spain where the percentage of private schools is much higher than in China), education has become a great business for foreign institutions, wealthy Chinese in China and

religious organizations and companies in Spain. Some of these institutions aim to offer an extra or different education to that established by general laws. This is the case of international institutions in both China and Spain, which offer western-style methodologies and bilingual classes, or religious institutions in Spain which aim to reinforce certain religious beliefs or have separate schools for girls and boys.

6.2.4. EDUCATION MANAGEMENT, LEGISLATION AND RESPONSIBLE BODIES (P. 6)

Despite the character (public or private) of each school, all institutions in both countries are compelled to follow national legislation and organization, which is addressed in Table 6.6. It is appreciable that the distribution of responsibilities follows similar channels from national to local realities. However, as mentioned in a previous parameter, the philosophies underlying the organization are different due to the tight control of the Communist Party versus the Spanish democratic state, hence the divergences in the weight and responsibilities of each body.

Table 6.6: China-Spain education management, legislation and responsible bodies

Indicators	China	Spain
Current general law of education	1986- Compulsory Education Law of the People's Republic of China. 1995- Education law of the People's Republic of China. (+Teachers Law, 1993).	2006- Organic Law 2/2006, of 3 May, on Education 2013- Organic Law for Improving Education Quality (expected to be fully implemented by 2017/2018).
Grade of general education decentralization	Centralized with some competencies transfer to the regions. Central Chinese government provides policy directives, curriculum guidelines and materials to all schools. Provinces can propose some material but have to be approved by the central government.	Decentralized. Central government dictates guidelines for general law and curriculum. Autonomous community makes the guidelines concrete. Schools adapt to their reality.

Management and administration bodies of general education	Main responsible: Ministry of Education. Governments at the central, provincial, municipal and county levels each have departments of education.	Ministry of Education in some provinces. Autonomous Communities.
Management bodies of higher education	- Under the direct administration of the central government - Under the non-educational central ministries - Under provincial and other local authorities - Private institutions.	- Public: Autonomous community and national administration. - Private institutions.
Responsible body for curriculum design	Three levels: Ministry of Education, regional administration and schools.	Three levels: Ministry of Education, regional administration and schools.
Responsible body for materials and books	The State Council examines and approves textbooks and teaching equipment according to the safety standards set by the State, including books, materials and articles.	No regulatory body.

Source: Researcher's original compilation from MOE (1986, 1996a), MECS (2006a) and other national legislation cited in sections 4.1.5 and 4.2.5

The data of the current educative legislation, presented in Chapter 4, offer some clues to the way the education systems are conceived. Chinese education has as its basis the general education legislation from 1986 and 1995 which has been shaped through other orders focusing on specific matters. Education has been progressively adapted to different levels, institutions, specific issues or collectives without designing a completely new paradigm for the Chinese system.

In contrast, in Spain, two recent laws overlap, and the expectations of overriding or modifying the actual LOMCE in the next term are significantly high. As a consequence of these historical variations, education philosophies and curricular fluctuations are often found in Spanish education. These kinds of fluctuations are not an issue in Chinese legislation but this is easily explained, since the Chinese basis is less detailed than the Spanish. On one hand, Chinese national education law established all the general characteristics of the system (such as underlying values, length of compulsory education and teachers' qualifications), and later

developed national orders to detail educational structure and subjects. On the other, Spanish national education law directly tackles system organization, structure and subject distribution.

In spite of the character of the institutions, public or private, and their internal philosophy or dissimilarities noted in the preceding point, all institutions in both countries are required to follow national directives from the main management body, the Ministry of Education. However, Spain has a predominantly decentralized system where several competencies are transferred to the autonomous communities, while the Chinese educative system is linked to a centralized system. In China, the central government provides policy directives, curriculum guidelines and materials to all Chinese schools. Provinces can make proposals on all three components, but these cannot be applied until the central government has analysed and approved them.

In contrast, the Ministry of Education is complemented in Spain by the administration of each autonomous community on topics such as education inspections, special service for students such as multiprofessional teams (psychology, school orientation), the management of teachers and schools, the development, authorization and implementation of schools building's reforms and creation, or the development, authorization and implementation of experimental plans and pedagogical investigations, among others. In addition, central government neither provides material for all schools nor bans contents.

In China, the responsibility for education administration is also held by the provincial, municipal and counties' departments of education, mainly in charge of their local administrations. Nonetheless, Wang clearly describes the divergences between the systems. He notes, "In many Western countries the power of the state is threefold – executive, legislative and judicial – and administrative power is usually separated from legislative power and judicial power. Unlike these Western countries, administration in China is a direct action of the state including lawgivers. Exercising state power to organize, guide, and manage education is the key feature of the Chinese educational administration" (Wang, X.F., 2003). In China, local governments have a key role in promoting and expanding compulsory education, while central and provincial governments focus on higher education. This distinction is not made in Spain.

The management entities of higher education differ between these two countries. In China there are four possible management bodies for higher education institutions: higher the central government, other non-educational ministries, provincial or other authorities, or

private owners. In Spain, there are only two kinds of institution: public, which are mainly managed by autonomous communities or the central government in the case of UNED, or private, managed by private entities.

Another divergence addresses the management of the material. In China, all materials in schools accompany the curriculum selected by the Ministry of Education, the main responsible body for curriculum development, later adjusted by each regional administration. China has a strict policy for textbooks, material and articles, following Chinese values and safety standards. Out of the materials proposed by the government, regions choose their preferences. In Spain, responsibility for developing the school curriculum is divided between central government, autonomous communities and schools, with no specific body to control materials or textbooks.

6.3. SECONDARY EDUCATION CURRICULUM DESIGN AND SCHEDULES (CC. 3)

Although Chinese general legislation has been more stable than Spanish legislative directions, curriculum design has lately undergone several modifications. As noted by East China Normal University professors Zhang and Zhong, "The most basic and broad project in educational reform in contemporary China is curriculum reform, which calls for serious curriculum research. The process of curriculum research is a process of seeking curriculum wisdom embodied in the true, the good, and the beautiful and of understanding curriculum history, reality, and process" (Zhang and Zhong, 2003).

This section tackles the current curriculum distribution and time organization in national proposals. However, it is essential to note that, owing to intra-national differences among provinces and the fact that Shanghai is a central element in this study, as an international case of interest, the curriculum example of China refers to the adaptation of the general guidelines (Section 4.1.5.4) by Shanghai municipality.

6.3.1. CURRICULUM ORGANIZATION (P. 7)

This parameter analyses the internal organization of secondary education. Curriculum organization is the backbone of secondary education. Indicators were chosen to understand student life, relevant facts and choices during this period, as well as to better appreciate the atmosphere in which teachers have to run their classes. Table 6.7 and Charts 6.4 and 6.5, display the data for these indicators.

Table 6.7: China-Spain general secondary education curriculum organization

Indicators	China	Spain
Political values underlying education	Chinese Communist Party values (Communism based on Marxism and Mao's values)	Democratic values (details depend on the political party, basis is determined by the Constitution and international treaties)
Paths	No different paths, but some elective classes	Junior: 1st cycle no paths. 2nd cycle 2 paths (academic education or preparation for vocational training) Senior: 3 paths (sciences, humanities and social sciences and arts)
Curriculum organization	Junior: subjects Senior: credits (144)	Junior and senior: subjects

Source: Researcher's original compilation from MOE (2001b, 2003), MECS (2013a) and other national legislations cited in sections 4.1.5 and 4.2.5

As explained before, political values underlying education denote another great divergence between China and Spain. These principles are explicitly declared in both national education laws (as explained in Sections 4.1 and 4.2). China shows its commitment to the values established by the Communist Party, based on Marxism and Mao's philosophies; Spain works from values related to its political organization, democracy, and extolled values of equality and respect for human rights, among others. In Spain, certain differences can be found in the underlying values depending on the political party promoting the law, leading to more conservative or progressive policies.

Not only the philosophy but the diversification into different paths at each level of secondary education shows a clear divergence between the two countries. In China, both levels of secondary education offer some elective classes but they are not separated into different paths. In secondary education, students do not choose classes which will open or close certain doors in their futures, and the only diversification is between ordinary or vocational education. In contrast, in Spain, according to the new LOMCE, the last cycle of junior secondary education already classifies students into two different pathways.

Choosing one or the other affects the examination that students will take to enter senior secondary or vocational schools. The inclusion of the two-path distribution in the last year

of junior school, a compulsory stage, with such crucial consequences, is one of the controversies raised by the new law. As seen in the next indicator, the creation of these paths is correlated to the curricular distribution between elective and compulsory classes.

The diversification at this level, now existent in Spain but not in China, shows a clear lack of connection between the new design of the system and the values promoted by this and all other national laws which proclaim the importance of democratic principles. As detected by Lamb (2008, p. 8), differentiation into pathways, (mainly in senior secondary education since it is not frequent in junior schools) has historically led to situations where subjects are "organised and taught in ways that exclude and discriminate", and because "of the failure of any system to construct a curriculum or program based on academic knowledge, including methods of pedagogy and assessment, which operates for all students". In these systems, in which a certain kind of education is devaluated and any other type not leading to university is considered to have an inferior status, the most affected students are those who come from poor backgrounds. "Preparation for university tends to dominate its form and function, working as a 'conserving force' against attempts at universalization. It has prevented the development of truly democratic, inclusive and universal programs of teaching and learning built around a common curriculum" (Lamb, 2008, p. 8-9).

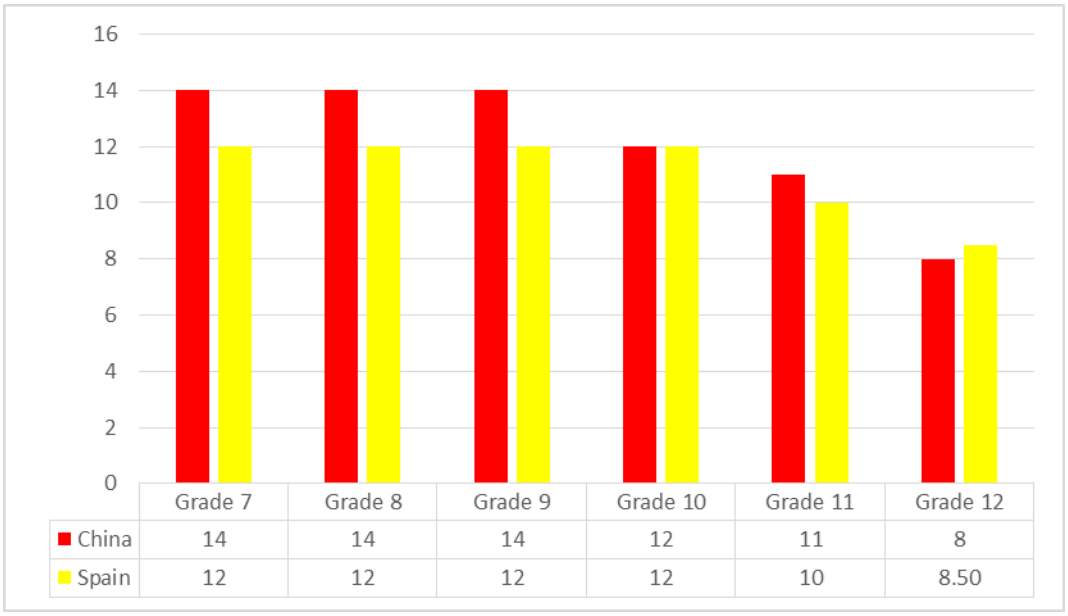
In junior secondary education, both nations organize their curriculum by subjects, but China has instituted a credit system for senior secondary education, where students shape their total of courses up to at least 144 credits. This kind of organization in senior secondary education is very similar to what students will deal with in higher education institutions. The distributions of credits and the weight of each credit, 18 hours, is generally the same in this preliminary level and in universities.

The change from one system (subjects) to the other (credits) is made in Spain from secondary schools to universities: although this is not the only challenge in this transition, it may be one of the difficulties for students when acceding to higher education institutions. According to Tejedor and García-Valcárcel (2007), most dropouts in universities occur in the first year, and, according to several studies many students find it difficult to adapt from senior secondary education to university (Serrano Ortega, 2010). Chinese secondary education seems to be, at least in this aspect, more coordinated with the next academic level.

Despite the type of curricular unit of design, the final number of exams, materials, number of teachers, homework and extra workload, or schedule distribution, is related to the

amount of subjects. As shown in Chart 6.4 (organized by grades because of the need for equivalence between both territories) China and Spain have a similar number of subjects in both junior and senior secondary school, and both countries show a declining path in the number of subjects through secondary education.

Chart 6.4: China-Spain number of subjects per year in secondary education



	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
China	14	14	14	12	11	8
Spain	12	12	12	12	10	8.50

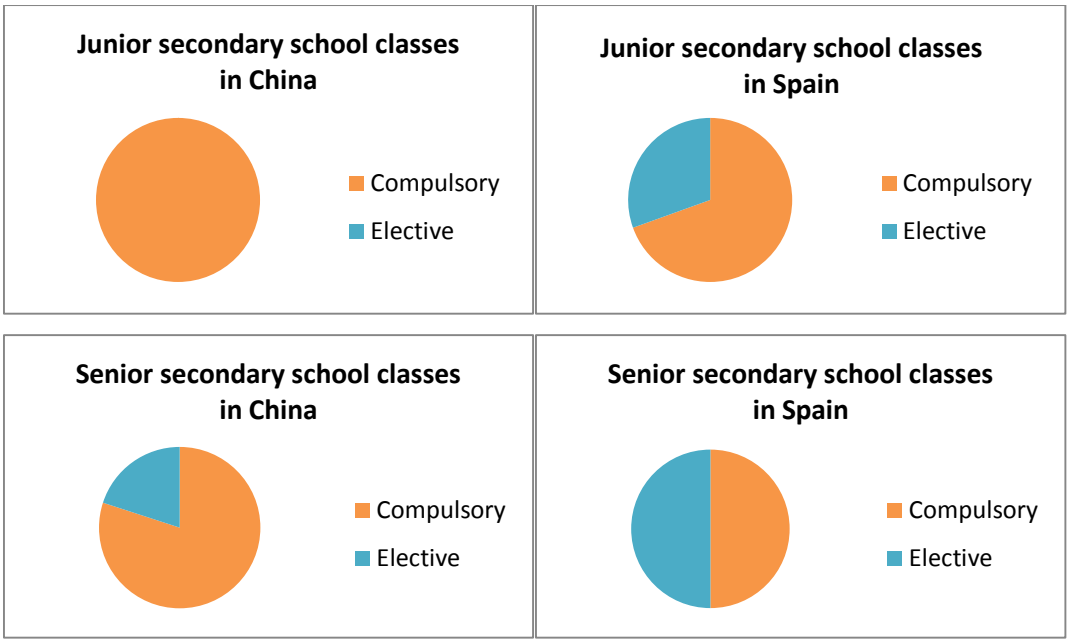
Source: Researcher's original compilation from MOE (2001b, 2003), MECS (2013a) and other national legislation cited in Sections 4.1.5 and 4.2.5

Greater variances in the number of subjects can be found among autonomous communities in Spain, due to the existence of a decentralized system. Differences are mainly found in senior secondary education. At this level, schools can have the same number of subjects in the first and second year, though is not common. Normally, 2nd year students of senior education have between 1 and 3 fewer classes.

The Chinese path is very clear in all schools: the number of subjects decreases every year. There are some subjects that are not counted as regular classes, which shows a clear divergence between the Chinese and Spanish curricula. Chinese students have complementary classes or activities, explained in Section 4.1.5.4, which do not necessarily need examination. These classes can be related to other subjects or take place only during certain times in the year, such as community service, research activities or discipline subjects (civics, safety and prevention, etc.). Another divergence is the daily compulsory 40-minute for eye exercises, non-existent in the Spanish curriculum organization.

In addition, the mentioned flexibility in Spain is also clear when tackling the distribution between compulsory and elective classes in both junior and senior secondary curricula. The variances are shown in Chart 6.5 (due to the differences among schools, the percentage for Spain refers to the average possible distribution).

Chart 6.5: China-Spain distribution of compulsory and elective classes (%)



Source: Researcher's original work from MOE (2001b, 2003), MECS (2013a) and other national legislation cited in Sections 4.1.5 and 4.2.5

As a consequence of these two indicators, the presence of paths and the credit/subject distribution, senior secondary education in China has around 20% of its classes elective, but no optional lessons in junior high school. In Spain, depending on the autonomous community and the specific programmes of the schools, students may have between 20% and 41% of elective classes in junior secondary school and between 47% and 53% at the senior level. The Chinese curriculum results from the centralized system of education, less flexible than the Spanish. The rigidity, mainly in junior secondary school, is a response to homogenization criteria aiming to provide a quality education in highly different contexts, which are later measured by the aforementioned national examinations.

6.3.2. SCHEDULE ORGANIZATION (P. 8)

Because of external evaluations, which have a great impact on students' lives and futures, certain levels of education have strong academic goals. For instance, it is commonly known

in both countries that the last year of senior secondary education focuses on preparing for the university entrance examination. In this sense, a clear emphasis on the national assessment can be found in China, exposed by the fact that the numbers of subjects decreases through the years while the number of weeks a year increases. It is noticeable that students have fewer subjects but more weight and time for certain classes related to the secondary school assessment and the university entrance examination. This is presented in Table 6.8.

Table 6.8: China-Spain secondary education schedule organization

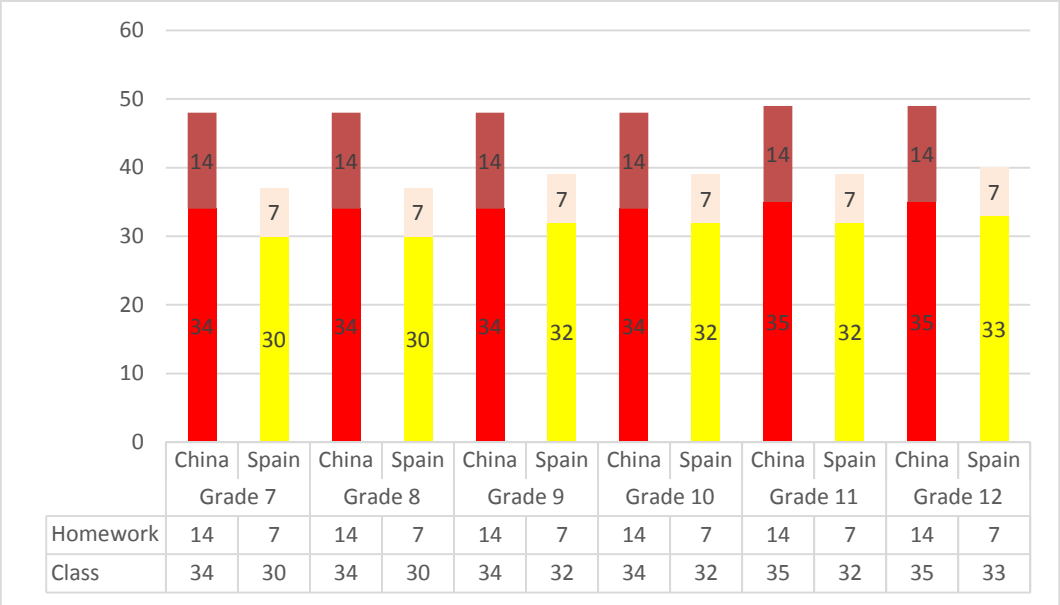
Indicators	China	Spain
Number of weeks per year	Junior: 35 weeks a year + 2 weeks for examinations Senior: 40 weeks a year (of which one for social practices)	Junior and senior: 175 days a year (35 weeks)
Time per class	Junior: 40-45 minutes per lesson Senior: 40-45 minutes per lesson	Junior and senior: at least 55 minutes per lesson

Source: Researcher's original compilation from MOE (2001b, 2003), MECS (2006a, 2013a) and other national legislation cited in Sections 4.1.5 and 4.2.5

At the compulsory level, students in both countries have the same number of weeks, 35, not including examination time; however, the post-compulsory level shows a greater divergence. In senior secondary school, Chinese students have four more weeks a year than Spanish students, plus one week for social practices. Another divergence is the length of the classes, at both stages being at least ten minutes shorter for Chinese students.

The length of the classes, the student-teacher ratio and the strict focus on final and national examinations are some of the motives behind the Chinese methodology. As explained in Chapter 4, the context and culture of education is radically different between both countries, hence activities in China tend to be less time-consuming and more individualistic and content-driven. Classes are understood as a time to offer content but rarely to assimilate or discuss it, since the rhythm of the classes is rather fast. Hence, besides the school schedule, students need to expend high amounts of time working at home, as displayed in Chart 6.6.

Chart 6.6: China-Spain classes and homework weekly average (hours)



	China	Spain	China	Spain	China	Spain	China	Spain	China	Spain	China	Spain
	Grade 7		Grade 8		Grade 9		Grade 10		Grade 11		Grade 12	
Homework	14	7	14	7	14	7	14	7	14	7	14	7
Class	34	30	34	30	34	32	34	32	35	32	35	33

Source: Researcher's original compilation from MOE (2001b, 2003), MECS (2006a, 2013a) and OECD (2014e)

At junior secondary level, the official time spent in school, per week, is two to four hours higher for Chinese than for Spanish students, while in senior secondary school, the difference is two to three hours more for Chinese students. Classes are distributed over periods 10 to 15 minutes shorter in China than in Spain, as a general rule. However, autonomous communities in Spain are the organism responsible for settling the exact length of classes.

Besides the official time, the Chinese workload is considerably higher than the Spanish. For instance, Chinese students spend 14 hours a week doing homework, twice the time invested by Spanish students. Other considerations to be taken into account when measuring the time spent in schools is, as shown in Chapter 4, the extra time during weekend, afternoon or morning classes or the extra time in key or boarding schools. These classes and schools are very frequent in China, mainly for wealthy families or for scholarship students going to other provinces to prepare for the Gaokao. In Spain, boarding schools are very rare and schools do not have compulsory classes on weekends or outside official school time.

The total time for secondary students in China ranges between 48 and 49 hours a week, including homework, and the Spanish week is between 37 and 40 hours. Children in both countries have, as average, the same or longer working hours as adults' workday.

6.4. SECONDARY EDUCATION: INSTITUTIONS AND TEACHERS (CC. 4)

Several international studies have claimed that the attractiveness of the profession is one of the keys to interest the best candidates towards teaching programmes. The attractiveness of a major is related to professional circumstances, salaries and the status, among others. This section gives general information about teachers' working conditions in both countries. It is necessary to remark that specific circumstances in China, such as teachers' salary or working time, are quite dissimilar among regions and even among schools, especially when comparing rural and urban areas.

In addition, working conditions are very significant not only in attract, but also in retaining the best teachers. There are, according to Eurydice (2004), three major considerations in this matter, (1) the variety of tasks teachers have to perform, (2) their working time, and (3) the conditions governing salary increases. The juxtaposition of the main information selected for this comparison category, tackling teachers' working settings and institutions, is shown in Tables 6.9-6.11 and Charts 6.7- 6.9. The last table of this comparison category, Table 6.12, compares social status, which is somewhat of a consequence of the other indicators.

6.4.1. POLICIES AND QUALIFICATION (P. 9)

As explained previously, education legislation is designed in a pyramidal way; teacher education policies are not exempt from this type of organization. Responsibility for designing and implementing teacher education policies is, in both countries, shared between central and regional administrations. Teachers' qualification requirements depend on how flexible the distribution of power is among each level of administration and the national guidelines. This matter shows a clear divergence between China and Spain, presented in Table 6.9.

Table 6.9: China-Spain teachers' policies and qualification

Indicators	China	Spain
Teachers' type and level of qualification for each stage	Early childhood and primary education: teaching college (3-year) degree and undergraduate degree. Junior secondary schools: undergraduate degree Senior secondary schools: undergraduate and Master's degrees Teachers' examination	Early childhood and primary education: undergraduate degree Secondary education: undergraduate and Master's degrees
Responsible body for teacher education policies	Central and regional government	Central and regional government

Source: Researcher's original compilation from MOE (1993) and MECS (2006a)

In Spain, there is no kind of flexibility or alternative path to accede to each level in the teaching profession: all teachers for early childhood education and primary education must have a 4-year undergraduate degree, while all secondary teachers must have a Master's degree. On the other hand, flexibility in pathways and structures is itself one of the core concepts in Chinese teacher education. Access to the teaching profession is linked to education taken in many different paths and institutions: vocational (mostly for early childhood education), undergraduate and Master's degrees are common paths.

The Spanish system ensures that all teachers have similar qualifications, but closes the door to experienced workers from other fields. China's policies were made to cover the need to qualify a large mass of teachers which finally led to a greatly diversified system, always under the harmonization ensured by the Chinese central government.

There is another divergence in this matter, referring to an alternative path into the teaching profession. China established a qualification examination as an alternative path for those with knowledge but no specific qualification in education. Spain, like most European countries (European Commission/EACEA/Eurydice, 2013), does not have any alternative pathways, or a specific examination to qualify teachers.

Spain, and China to some extent, share the current tendencies of Europe when analysing primary and senior secondary education teachers. The predominant qualification for primary and junior secondary teachers is a Bachelor's degree and, in most countries, a Master's degree is required for senior secondary teachers (European Commission/ EACEA/Eurydice, 2013). Spain slightly distances its system from this organization and asks for the same requisites and level of education for junior and senior secondary teachers. It is not possible to categorically affirm that such a difference is also reproduced in the Chinese system, since both teaching Bachelor's and Master's degrees are common.

6.4.2. TEACHERS' SALARIES (P. 10)

Teachers' salaries are one of the parameters included in teachers' working conditions which affect teaching attractiveness. The divergences between salaries is displayed under two perspectives. Table 6.10 offers a general point of view, while Chart 6.7 frames the salaries in terms of the average and minimum salaries of each country.

Table 6.10: China-Spain teachers' salaries

Indicators	China	Spain
Secondary teachers' salary	Mainly depends on the region, level, subjects and extra classes. ¥2,000 to ¥6,000 (US$325 to US$977) including economic complements. Equal to or higher than State public workers' salaries, and gradually raised according to a system of promotion.	Gross salary: €31,079 to €43,883 (US$38,537 to US$54,414 a year) including complements. Net salaries usually range from €1,700 to €1,800 a month (US$2,108 to US$2,232).
Salary complements	Yes. Depend on the region. Some extra benefits such as a residence or apartment, or other living expenses, performance pay and year-end awards.	Yes. Depend on geographical location, additional responsibilities and further professional development qualifications.
Responsible body for teachers' complements	Central, regional and/or local government.	Autonomous communities.
Teachers' extra pay according to students' performance	Very common.	No.

Source: Researcher's original compilation from MOE (1986, 1993), Sen (2015), Eurydice (2014) and national and international data cited in Sections 4.1.5 and 4.2.5

Flexibility (in China) versus homogeneity (in Spain) in teachers' qualifications is transferable into the working conditions. While all teachers in Spain have similar wages, slightly diversified because of specific supplements (due to geographical location, additional responsibilities or further career development profiling qualifications), salaries in China are characterized by their variety. Legally, Chinese teachers' salary has to be equal to or higher than State public workers'. In reality, their salary depends on the region, level, subjects, extra tutoring, or how certain benefits are allocated.

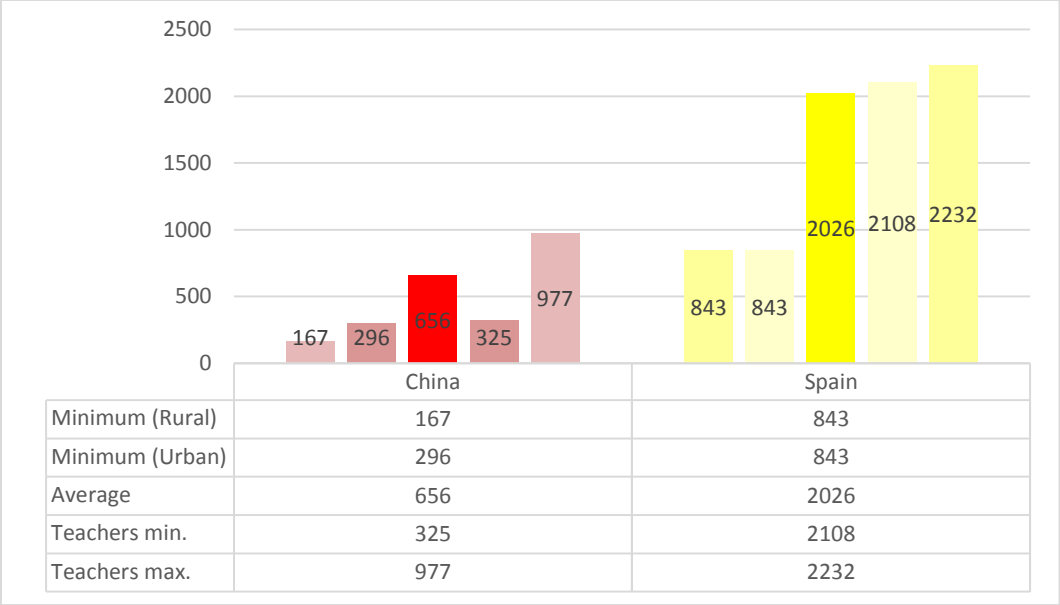
As well as the supplements contemplated in Spain (always transferred into economic benefits), teachers' supplements in China may include a residence, clothes, performance pay, and awards at the end of the year or on national holidays. In addition, in Asia, it is very common for teachers to receive presents, including money, from grateful families. This fact is understood in two ways: families with no hidden goals but who appreciate teachers' dedication and families with debatable intentions. This habit is not shared in Europe, especially regarding money, since it could be read as a way to buy teachers' attention or students' grades, and rarely as a grateful gift.

A complement not included in Spain which is, however, very common in China, is additional pay related to students' performance. This divergence between China and Spain, is a convergence when analysing Spain and the European Union countries, where the most frequent allowances are for additional responsibilities or overtime, but only half of countries grant allowances based on teaching performance or student results (European Commission/EACEA/Eurydice, 2013). However, this kind of supplement raises several concerns owing to the "volatility and noise inherent in many performance measures found in the education sector", the "incompatibility with the norms of the teaching profession", the "sparse literature on performance standards and thresholds", or the fact that bonus awards could elicit behavioural responses and/or could elicit gaming or cheating (OECD, 2009c, p .91).

To understand the salary data in a real context, this study takes as reference both the minimum and average salary in each country, noted in the first section (P.2) of this chapter and in Sections 4.1.5.5 and 4.2.5.5. The result of the analysis of these data in their own

context is that teachers' salary is in a good position in both countries, and has a similar relationship within their own economic level. Chart 6.7 shows a graphic representation:

Chart 6.7: China-Spain monthly average, minimum salaries (net) and teachers' salary (gross) (US$)



	China	Spain
Minimum (Rural)	167	843
Minimum (Urban)	296	843
Average	656	2026
Teachers min.	325	2108
Teachers max.	977	2232

Source: Researcher's original compilation from MOE (1986, 1993), Sen (2015), Eurydice (2014) and national and international data cited in Sections 4.1.5 and 4.2.5

Spanish teachers' salaries are around twice the minimum wage, but there is not a noticeable difference when compared to the Spanish average net salary, being slightly higher. One of the divergences is that the Spanish minimum salary is the same in all autonomous communities, while it shows large differences among provinces in China. Similarly, in China, the difference between teacher's salaries and the minimum wages mainly depends on the province, always very appreciably, since it ranges between 2 to 6 times higher. A divergence from the Spanish situation is the variably of Chinese teachers' salaried compared to the average Chinese salary. The relationship is nationwide and stable in Spain, while in China it ranges from half of the average salary (but still higher than the lower minimum salary) in some provinces to 50% higher than the average salary in others.

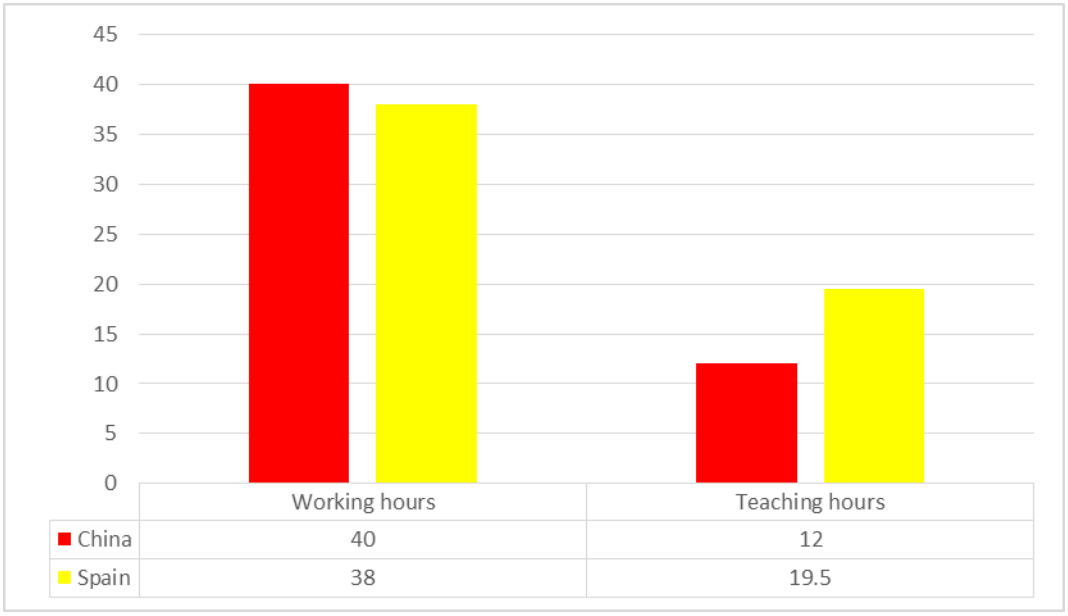
It seems that teachers' salary is, in general terms, close to the average salary in all areas. If comparing teachers' lowest salaries, probably from poor or rural areas in China, with the national average salary, it appears rather low, but when framing it against the minimum salary of urban areas, it is slightly higher. Hence, it is possible to assume that the lowest salary for

teachers corresponding to rural areas is an average and even a high salary in these areas where the minimum wage is almost half teachers' minimum wage.

6.4.3. WORKING HOURS (P. 11)

As above stated by Eurydice (2004), not only salary but teachers' tasks and time distribution have an impact on the attractiveness of the career. Chart 6.8 displays the correlation between teachers' working hours and in-class teaching hours.

Chart 6.8: China-Spain teachers' working and teaching hours



Source: Researcher's original compilation from National Institute of Education Science (2014) and Eurydice (2012)

Teachers' working conditions related to working time have, in general terms, numerous convergences between both countries and the divergences are found when looking into the internal organization. On one hand, Chinese secondary teachers work two more hours (40 hours) than their Spanish counterparts (38 hours). Conversely, Spanish teachers teach between 18 and 21 hours, representing 6 to 9 more classroom teaching hours than Chinese teachers. In percentage terms, Spanish secondary teachers must prepare between 50% and 75% more classes, with 8 to 11 fewer weekly hours. That complementary time in China is full of administrative tasks, as it is in Spain, with planning designs, tutoring with families or extra activities, among others.

On the other hand, while Chinese teachers are usually required to stay in the schools to complete their 8-hour day, Spanish teachers have a minimum compulsory time of 30 hours

a week. During these 30 hours, teachers are required to be in the school, while the other complementary hours are organized between the teachers and the head of the school. The distribution of hours is not completely equal in all institutions or regions, as it is not the 'invisible time' teachers in both countries work at home, including weekends and holidays.

6.4.4. INSTITUTIONS AND TEACHERS OF SECONDARY EDUCATION (P. 12)

Another parameter which affects teachers' working conditions, alongside salaries and working time, is the amount and kind of institution in which teachers are or will be working. Those components influence the overall situation of secondary education, having a great impact on the size of the institutions as well as the student-teacher ratio. To contextualize the number of teachers by type of institution, Table 6.11 shows the indicator of number of institutions and teachers before the indicators related to percentages (Charts 6.8 and 6.9).

Table 6.11: China-Spain number of institutions and teachers in secondary education

Indicators	China	Spain
Number of secondary schools (Junior)	57,299	2,142
Number of secondary schools (Senior)	15,727	6,153
Number of teachers (Junior)	3,738,658	68,037
Number of teachers (Senior)	1,874,052	311,407

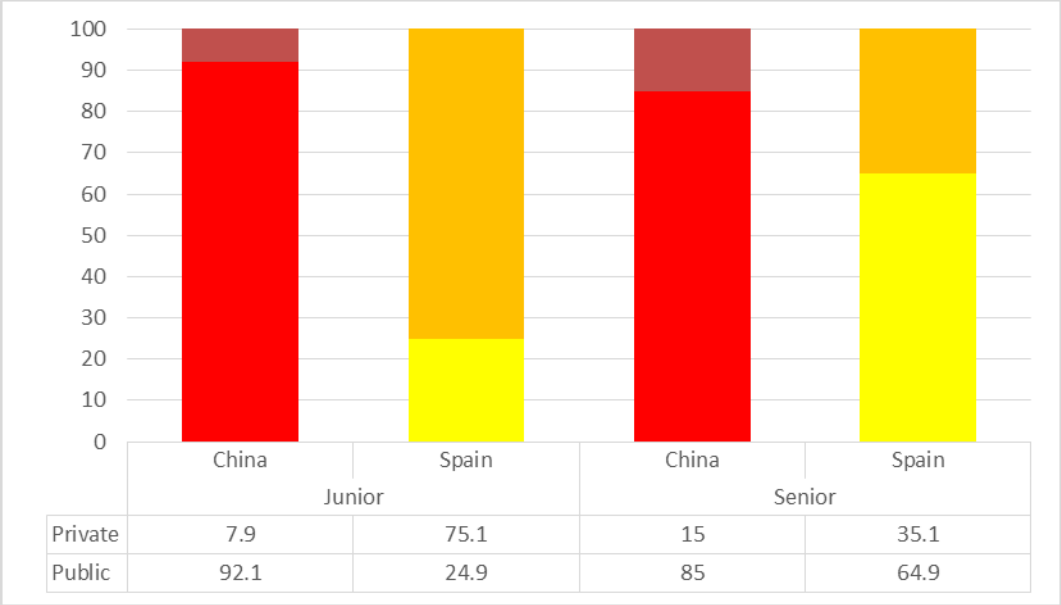
Source: Researcher's original compilation from National Bureau of Statistics of China (2014) and MECS (2015b)

These data are in harmony with the large size and population of China, and the smaller area and population of Spain. There are 27 times more junior secondary schools in China than in Spain, but only 2.7 more regular senior secondary institutions. The number of teachers is even higher: 55 times more teachers at the lower level and 6 times at the upper level. It is possible to extract from this information that, on average, Chinese institutions have more teachers than Spanish institutions, mainly in junior secondary schools. Larger institutions usually come with greater difficulties in managing and coordinating human, economic and material resources. This difference between the countries must be taken into account when contextualizing teachers working conditions.

Analysis of the data displayed in the table also highlights the different progressions from junior to senior secondary school between. While the number of Chinese teachers and schools decrease in senior secondary education, respectively representing one third and a half of those of junior secondary schools, the number of institutions Spain's increases threefold from junior to secondary school and the number of teachers by 4.5 times. Nonetheless, these data must be framed by also comparing also the number of students; hence this question is examined in more depth in Section 6.5.1.

Regarding the type of institution, categorized according to the funding source into public and private schools, a noticeable gap is found between the countries. In China, the results in this matter are very clear; a large majority of institutions are public, in both junior and senior secondary education. In Spain, the results are completely inverted: most institutions are private or state-funded private, mainly at the lower level.

Chart 6.9: China-Spain public/private institutions ratio (%)



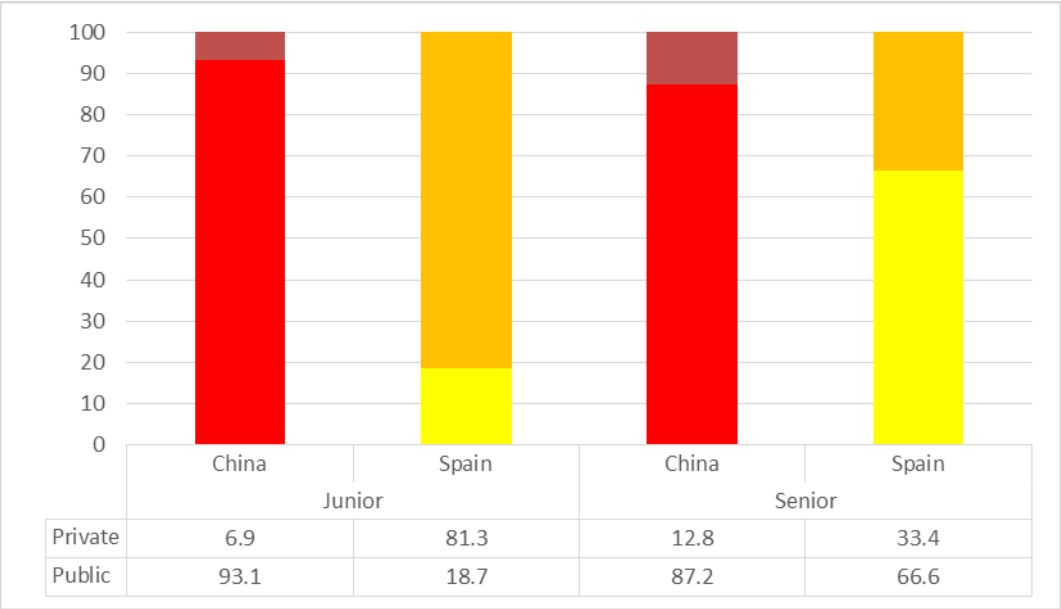
	Junior		Senior	
	China	Spain	China	Spain
Private	7.9	75.1	15	35.1
Public	92.1	24.9	85	64.9

Source: Researcher's original compilation from National Bureau of Statistics of China (2014) and MECS (2015b)

The distribution of private/public junior secondary schools in Spain is disquieting, since only 25% are public schools, and 75% are private or state-funded private, while in senior secondary education there is slightly more balance (in the opposite distribution, with more public than private), with 65% public institutions and 35% private. In China, at both levels, public institutions are far more common than private ones. The percentage of private institutions is, in junior secondary education, 67% higher in Spain than in China; this

percentage lowers to 20% higher in senior secondary education. The emphasis in the countries on different kind of institutions, public in China and private in Spain, shows almost perfect equivalence in the distribution of teachers.

Chart 6.10: China-Spain teachers by public and private institutions (%)



	Junior		Senior	
Private	6.9	81.3	12.8	33.4
Public	93.1	18.7	87.2	66.6

Source: Researcher's original compilation from National Bureau of Statistics of China (2014) and MECS (2015b)

This indicator, referring to the weight of public and private institutions, confirms a large gap between China and Spain. In China, teacher distribution between these two kinds of institutions almost perfectly matches the distribution of schools, while Spain's data are less balanced.

The amount of teachers working in private and public institutions maintains the above percentages in each kind of institution, mainly in China where, for instance, 93.1% of teachers work in public schools and 92.1% of junior secondary schools are public; hence, it is possible to affirm that there are not many differences in teachers' distribution between public and private institutions. Spanish teachers' distribution is also very similar except in junior secondary education, where there are 6% more teachers working in private schools than the equivalent percentage of institutions (75.1% private institutions which have 85.3% of the teachers).

It is fair to highlight that in Spain, many of the teachers working in junior secondary education work in schools supported by public funds, since these schools belong to the

above-explained co-funded/private schools. However, the selection process is completely controlled by the private or co-funded/private institution, as is the philosophy and methodology of each school.

As stressed by Professors Beltrán Llavador, Hernàndez Dobon and Montané López (2008), the Spanish investment of public money to benefit private institutions can only be explained in terms of the liberalization and commodification of education based on the principle of competitiveness. In China, there is no such liberalization of education and competitiveness is equally fomented in every school, as explained in Chapter 4. Due to the meritocratic and public system, formal education opportunities, at least until the end of compulsory education, are generally not based on parents' incomes (except for a minority who attend private schools).

In any case, in China, public money is not invested in private education. This situation, created in Spain in 1985 as a way to offer free education to all when public infrastructures were not enough, has been progressively twisted into a system where schools discriminate against children with special needs or immigrants (82% of whom are educated in publics schools according to the Ministry of Education, Culture and Sport, 2015b). As researchers note, "Often, these dynamics have been justified with ambiguous arguments, which deliberately confuse parents' freedom of school choice with schools' freedom of pupil selection. Thus, the institutional segregation and internal social division of educational opportunities (not just the division between public and private schools, but between schools of first and second category within the public offer) is encouraged"[77] (Beltrán Llavador, Hernàndez Dobon and Montané López, 2008, p. 6).

The mix of all these variables grants teachers a certain status and a positive social perception. These parameters are also considered to have an impact on the attractiveness of the profession and, in turn, in the profile of candidates who enter the profession.

6.4.5. TEACHERS' STATUS (P. 13)

This parameter is strongly related to the value of teachers in each society. Besides the description of teachers, families and students' roles in each society (corresponding to CC.5), two other sections must be taken into account to fully comprehend this parameter. On one side, Section 4.3.2 addresses the social perspective when understanding how teachers are

[77] Personal translation from Spanish version.

seen by their students during teaching time in the classroom. On the other, Sections 5.1.1 and 5.2.1 tackle the historical development of teachers' education, hence the development of teachers as social figures reflected in national legislation. Both the development of teachers' notions and the actual situation are relevant to bear in mind when understanding the current social status of teachers.

Table 6.12: China-Spain teachers' social status

Indicators	China	Spain
Legislation tackles respect for teachers and aims to "raise teachers' social status"	Yes, in both the Compulsory Education Law of the People's Republic of China and the Education Law of the People's Republic of China	Yes, in Organic Law 2/2006, of 3 May, on Education (LOE). (This article has not been modified by LOMCE, 2013)
Social perception	Highly respected. Very high 100/100 (Global Teachers Status Index)	Mildly respected. Medium-low 30.7/100 (Global Teachers Status Index)
Associated status	Comparable to doctors	Associated with social workers
Families' opinion towards the teaching profession for their children	50% of families would encourage their children to become teachers	32% of families would encourage their children to become teachers
Families' opinion of students' respect for teachers	75% of parents think teachers are respected by students	25% of parents think teachers are respected by students and 50% think students disrespect them
Trust in teachers	Trust in teachers to deliver good education graded by society: 6.7	Trust in teachers to deliver good education graded by society: 6.9

Source: Researcher's original compilation from MOE (1986, 1995a), MECS (2006a) and Varkey Gems Foundation (2013)

Legislation in China and Spain promotes social respect towards teachers, however some of the main divergences between these two countries are found in teachers' social status. Chinese teachers enjoy a very high social perception, while Spanish society only places teachers in a middle status. In contrast to Spain, the professions with which society associates teachers as a professional category clearly illustrate the importance of education and teachers

in China. Chinese associate teachers with doctors, traditionally considered a very respected and high-status profession, while Spanish society matches the teaching profession to social workers, a relatively new profession with a lower social status.

Certainly, the attractiveness of the profession is linked to social perception, and "the construction of professional identity, and its possible collision with a later reality or crisis, is also related to […] the representation of teachers' social image, to the teacher himself and to the society"[78] (Bolívar, 2006a, p. 99). A reliable indicator for better understanding the status of a certain profession in a society is the percentage of parents that would like their children to choose that profession. In this matter, half of Chinese parents would encourage their children to be teachers, 20 more percentage points than in Spain.

This indicator is closely related to the fact that three times as many parents in China than in Spain think that teachers are respected by students. In addition, in Spain, half of families think that students disrespect teachers. Two ideas can be taken from these data. First, the difficulty of raising the status of this profession when it is widely assumed that students do not respect their teachers, and second, that teacher's authority is clearly in crisis. Family and teachers perceive this lack of authority, since teachers' authority derives from a similar family crisis where authority structures have radically changed in recent times (Vinuesa Angulo, 2001).

However, there is one indicator in which Spanish teachers obtained from families one of the best evidences of support: trust. At only 0.2 points higher than the Chinese score, it seems that families in both countries consider teachers to be well-educated and to have the necessary skills and knowledge to deliver a good education.

6.5. SECONDARY EDUCATION: STUDENTS AND FAMILIES (CC. 5)

In line with the precedent category of comparison and with the development path of the research, the parameters included in this category go in depth into students' and families' perception of education as well as students' outcomes. The tables and charts in this section sum up the information in this comparison category (CC.5).

[78] Personal translation from Spanish version.

6.5.1. STUDENTS AND INSTITUTIONS (P. 14)

The first parameter of this category displays data regarding the number of students in each of the levels of secondary education, and finds the relationship between students, types of institution, number of institutions and number of teachers. After comparing the general features of each country and the big gap in population and area, it was expected to find a large divergence regarding amounts of educative resources. Due to this divergence, the charts in this parameter are shown in percentages, except for Table 6.13, which stresses the large differences in the number of students, which, being important data for understanding the challenges of each country, could not be translated into percentages.

Table 6.13: China-Spain number of secondary students

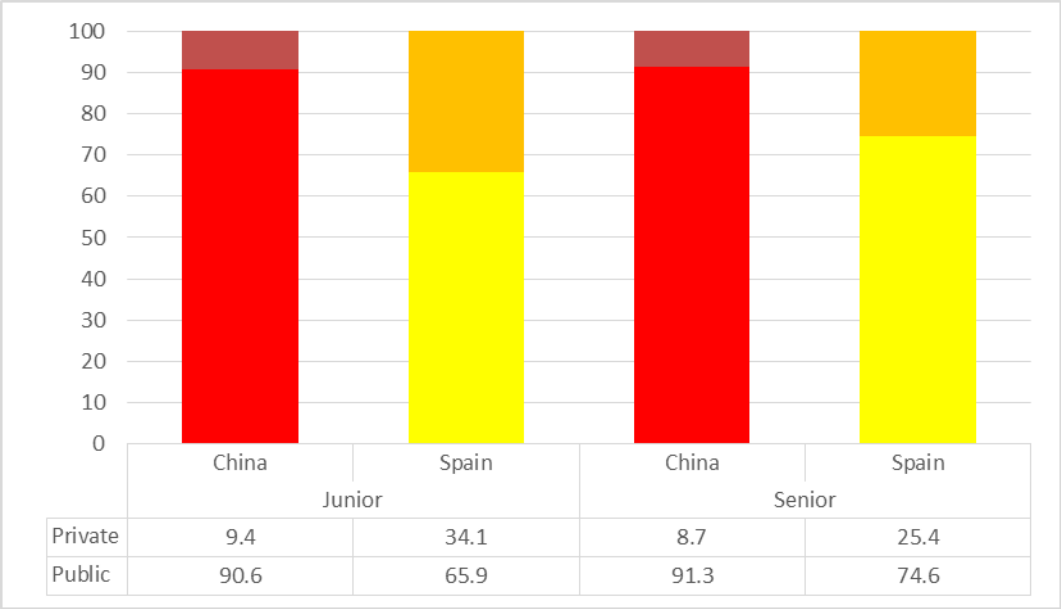
Indicators	China	Spain
Number of students (Junior)	49,014,214	1,808,502
Number of students (Senior)	26,675,262	634,604

Source: Researcher's original compilation from National Bureau of Statistics of China (2014) and MECS (2015b)

As noted above, the number of junior schools in China is 27 times higher than in Spain. The contrast with this indicator (number of students) shows a great equivalence among institutions and students. There are also 27 times more students in China than in Spain. When confronting the number of students enrolled at this level, the distribution of students shows that China has, on average, one junior secondary school for every 855 students, very close to the Spanish average of one junior secondary school for every 844 students.

On the other hand, senior secondary education shows a great discrepancy. China has almost three times more institutions, but Chinese student numbers are 46 times higher than their counterparts in Spain. While in Spain there is one senior secondary institution for every 103 students, in China each senior secondary school has, on average, 1,633 students. Certainly secondary schools do not have a standardized size; however, these data alongside other facts such as the enrolment rate and student-teacher ratio (Section 4.1.5.6 and 4.2.5.6), may help to get closer to, and explain, the real situations in secondary schools. Another indicator contributes to the understanding of secondary education in both countries, and complements the previous subsection student distribution between public and private institutions.

Chart 6.11: China-Spain students by public and private institutions (%)

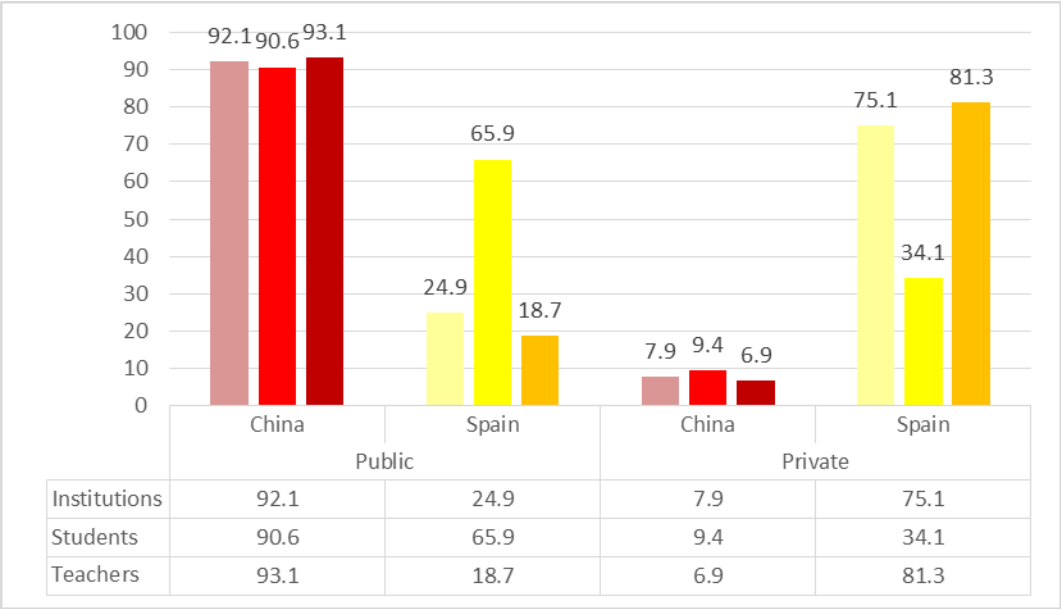


	Junior		Senior	
	China	Spain	China	Spain
Private	9.4	34.1	8.7	25.4
Public	90.6	65.9	91.3	74.6

Source: Researcher's original compilation from National Bureau of Statistic of China (2014) and MECS (2015b)

When comparing students and kind of institutions, it can be categorically declared that most Chinese students attend public institutions, while in Spain more than a third in junior secondary school and a quarter in senior secondary school are enrolled in private schools. Looking at the number of all elements, institutions, teachers and students, and the relationship between them, it can be affirmed that the Chinese public offer is much wider than the Spanish's. With an increasing the level of education, the data show an opposite trend of development between both countries: the Chinese public offer slightly decreases in post-compulsory education; the Spanish offer notably increases. The biggest difference and unbalanced feature is located in junior secondary education. In Spain, most institutions and teachers are private but most students attend public schools.

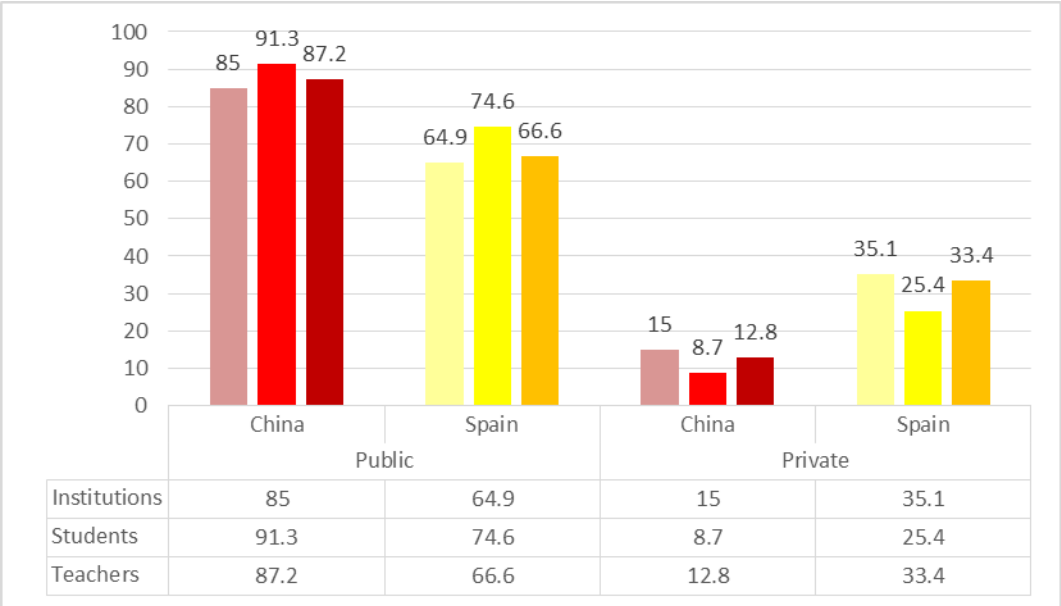
Chart 6.12: China-Spain public/private distribution of institutions, students and teachers in junior secondary education (%)



	Public		Private	
	China	Spain	China	Spain
Institutions	92.1	24.9	7.9	75.1
Students	90.6	65.9	9.4	34.1
Teachers	93.1	18.7	6.9	81.3

Source: Researcher's original work from National Bureau of Statistics of China (2014) and MECS (2015b)

Chart 6.13: China-Spain Public/private distribution of institutions, students and teachers in senior secondary education (%)



	Public		Private	
	China	Spain	China	Spain
Institutions	85	64.9	15	35.1
Students	91.3	74.6	8.7	25.4
Teachers	87.2	66.6	12.8	33.4

Source: Researcher's compilation from National Bureau of Statistics of China (2014) and MECS (2015b)

This choice of public or private education is a consequence of both political systems. The Chinese Communist Party still carries out protectionist policies for public institutions, promoting Chinese culture and values, and setting strict requisites to institute-schools or other business, mainly for foreigners. On the other hand, Spain is immersed in European and liberal policies, looking to reactivate the economy and promoting national and foreign initiatives and investments in any field, including education.

Along the Spanish dichotomy explained in the previous section between private and public institutions and first and second level schools, other signals of the commodification of education are being displayed. Not only in Spain and China, but internationally, new terms coming from economic models, are taking over educative systems. Financial quality indicators in private companies such as "efficiency" or "excellence" are now frequently being used in educative systems worldwide (Beltrán Llavador, Hernàndez Dobon and Montané López, 2008).

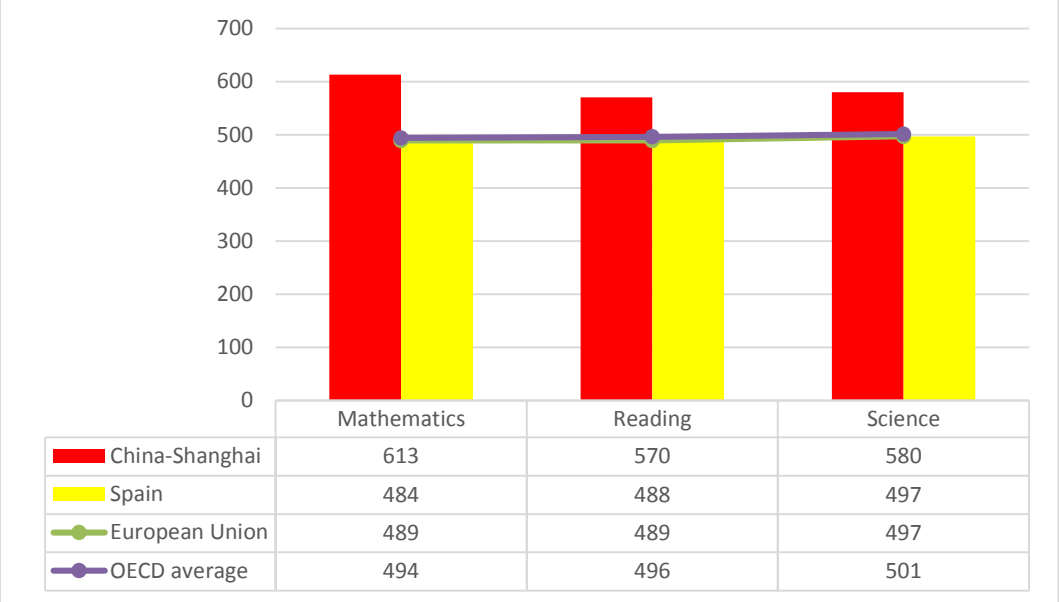
Assuming that commodification of education has reach all educative spheres and countries, students are part of a globalized sector of education and their outcomes are measured by international assessments, these terms are causing great damage in several aspects of the educative system. In Spain, under the premise of quality, private education is intensified and stratification is indirectly promoted, while public schools are becoming a subsidiary of the private (Beltrán Llavador, Hernàndez Dobon and Montané López, 2008).

The situation is not completely different in China, but the timing and methods are. Chinese students' segregation is not made between public and private schools (which have a small percentage of students), but between key and regular schools. Still, this division starts in senior secondary school, and it is forbidden by law to segregate students in compulsory education for any reason, including religious beliefs or sex (contrary to the current situation in some religious schools in Spain).

6.5.2. ACADEMIC RESULTS (P. 15)

All the previous indicators have consequences for students' academic outcomes. It is no possible to analyse the academic results of the whole China, since the international assessment in which China takes part, PISA (2012), only published the results of Shanghai. This sample, small for calibrating this giant, is highly representative of the core city of this research. This section also encompasses also the average results for the EU and OECD.

Chart 6.14: Juxtaposition of China-Spain secondary education students' academic results (PISA 2012)



	Mathematics	Reading	Science
China-Shanghai	613	570	580
Spain	484	488	497
European Union	489	489	497
OECD average	494	496	501

Source: Researcher's original compilation from OECD (2014c)

The main representative city of China, Shanghai, clearly surpasses the Spanish results in all areas, but mainly in mathematics where Chinese students obtained, on average, 129 more points. Sciences and reading scores are also around 80 points higher for the Asian students. Hong Kong, Taiwan and Macau also participated in PISA 2012, obtaining excellent results.

All four areas of China obtained higher academic results than the average of the European Union, the OECD and Spain. In addition, they all are among the six best countries in the world. The hegemony of Asia, mainly of China, in this assessment is clear: out of the top ten territories, seven are Asian, of which four are Chinese. The other three, Singapore, Korea and Japan, still ranked higher than the first three European countries, Liechtenstein, Switzerland, and Netherlands.

Another significant difference is found in the field of the results. Europeans achieved their best results in sciences and Chinese students (from all four areas) obtained their best grades in mathematics; precisely, the hardest area for students from Spain and the average of the OECD countries. The European Union average tied in reading and mathematics. Asian students found their highest difficulties in reading.

However, the academic results are only the starting point of a long-term movement towards the improvement of education. As Tiana (2011b) notes, PISA must be understood

in terms of three key elements, (1) assessments are necessary but must be followed by improvement initiatives, (2) the political dimension of the assessments highlighting certain areas of knowledge should be complemented by researchers who can offer a wider understanding of the real context, and (3) it is necessary to use multiple methods and instruments in order to get closer to the real situation. PISA cannot be the only parameter to take educative decisions if it is not complemented with other aspects such as teacher education and work, not tackled in PISA.

One of the complements offered by PISA implies the need to actualize Spanish methodologies. Spanish students often use memorization as a technique to learn mathematics, but the study notes that "memorisation is an ineffective strategy for learning mathematics and/or weaker students have a greater tendency to use this strategy" (p. 99). It also highlights that Spain and Brazil are above average in the use of both student portfolios and standardized tests (OECD, 2010).

Academic results are linked to several dimensions, circumstances and components, such as student efforts and the value that a society gives to education. Teachers' role and status, tackled in Section 4.1.5.5 and 4.2.5.5, have already showed some difference between how Chinese and Spanish societies understand education and teachers. The next parameter, aiming to complement that section, addresses students' and families' perception of education, through the analysis of their own roles in education.

6.5.3. STUDENTS' AND FAMILIES' PERCEPTION OF EDUCATION (P. 16)

This parameter complements the social status of teachers (P.13), including the perception of families regarding education. Like two pieces of the same puzzle, any changes in one affects the other, and vice versa. As with the status of teachers, this parameter shows more divergences than convergences, which must be understood in a cultural frame of understanding not only regarding education but regarding society in general. Table 6.14 presents the juxtaposition of each indicator.

Table 6.14: China-Spain secondary education students' and families' perception of education

Indicators	China	Spain
Reasons for students' failures	Understood as lack of application	Understood as a sum of different factors. Parents think if students fail, the first responsibility lies with the family (95.6%) and the second with teachers (88.2%)
Participation in class	Promoted only under teachers' request and directions	Promoted
Students' opinion about teachers' most important qualities	Knowledge and teachers' personal qualities and attitudes	(Personal) respect for students, fair and accessible. (Professional traits) being competent in their subject and having communication skills (clear explanations), and preparing classes
Students' opinion about teachers' less important qualities	Teaching methods and clear explanations	(Personal) being funny or discipline. (Professional) punctuality, knowing foreign languages or also being a researcher.
Families' influence on students' choices	Students are highly influenced by their parents when choosing an academic path	Parents' advice is taken into account, but freedom of choice is usually respected
Competitiveness	Parents also feel pressure because of their children's results. If results are bad, they feel embarrassed. Parents encourage competitiveness	Parents generally do not encourage competitiveness but cooperation

Source: Researcher's original work from Nisbett (2003), Faure (2003), Faure and Fang (2008), Foster and Stapleton (2012), Starr (2012), Zhang (2013) and other authors cited in Section 4.3.2

In China, as explained in Section 4.3.2, it is generally accepted that progress is strongly associated with hard work and it is always possible to succeed if you work hard enough. Therefore, the reason for students' failure is commonly understood as lack of application. On the other hand, Spain, as a western country, shares the notion that students can have great abilities in some subjects but very scarce ones in others, and that other components,

besides students' work, affect students' outcomes as well. Some of these components are related to school dynamics, such as the relationship between the student and their classmates or differences between teachers' methodologies and students' learning strategies; and some are neither related to nor manageable by the schools, such as the family context, expectations or resources. Still, while in China most of the responsibility is assumed by families and their own student, in Spain it is highly assumed that the responsibility is shared between families and schools.

These diverging conceptions among countries lead students to value completely different characteristics in their teachers. While Chinese students mainly look for teachers who know the subject, Spanish students want teachers who know the subjects and how to teach them, prepare the classes and have good communication skills. On their side, Chinese students do not value, as key elements of their learning process, either teaching methods or clear explanations.

Again, this parameter highlights how the student is the main person responsible for the outcome of the learning process, so whether they are able to grasp the teacher's knowledge does not depend on the teacher's pedagogical qualities. As a result of this imbalance between teachers' and students' role, the number of students in some classes and the classroom culture explained in Section 4.3.2, students' participation is another divergence between the East Asian and European system. While students in Spain are encouraged to participate, and participation is seen by teachers, families and students as a positive dynamic, usually in China, it is neither promoted nor seen as a positive feature if not asked for by the teacher.

In China, values of interdependence are stronger than in Spain. Because of this net of relationships and the fact that children's education may mean an increment in the income and status of the whole family, families often feel as much pressure as the students around their children's outcomes. Because of the cultural pressure, the restricted number of posts in high-level universities and the ambition to increase their economic and social status, families encourage competitiveness as a value and try to influence their children when choosing an academic degree. This is a great divergence when compared with Spanish society, where parents generally do not encourage competitiveness (cooperation is often seen as the positive counterpart of competitiveness) and their opinion of their children's academic choices usually does not have such a great impact.

6.6. SUMMARY OF THE CHAPTER

This chapter has made use of quantitative and qualitative data, mostly from primary and international and supranational sources complemented with secondary sources, to contextualize the information related to general features. It displays and contrasts the data of both countries in tables and charts, organized according to Comparison Categories 1 to 5 (connected to territorial, socio-political, economy, general system overview, secondary education, institutions, students and families).

The analysis confirms the diffusion in certain policies in education, such as general education structure, compulsory and free education levels, enrolment rates, school characteristics and economic investment. Although the structural components are rather similar, differences in secondary school contents, students and teachers' dynamics and students' outcomes are clear. The impact of some differences in demography is noticeable: the reduced number of places in universities in China which encourages competitiveness in the whole system, as well as cultural differences and meaning for education as a ladder to higher social and economic status.

CHAPTER 7

JUXTAPOSITION AND COMPARISON: SECONDARY TEACHERS' INITIAL EDUCATION AND INTERNATIONAL STANDARDS

The aim of the previous categories of comparison was to complement and offer a wide range of factors affecting the main topic of this research. The above-explained parameters have an impact on the aspects which make teaching a desirable profession: identity, working conditions, students' and teachers' roles, resources, etc. The following parameters directly tackle secondary teachers' initial education in each of the national contexts. As Darling-Hammond notes, "Much of what teachers need to know to be successful is invisible to lay observers, leading to the view that teaching requires little formal study and to frequent disdain for teacher education programmes" (Darling-Hammond, 2006, p. 1). To avoid that 'external feeling', this aims to address an approximation of the 'invisible knowledge' in the teacher education process.

The comparison categories are organized in a reasonable (and Chinese) way, from larger, general and national to smaller, concrete and local. The first two comparison categories deal with institutions and paths and curriculum design, as both belong to national and general guidelines. The next tackles professional competencies related to teacher initial education

programmes, since this is transversal knowledge and less rigid than the previous categories. The fourth category regards the final qualification obtained as a result of all the previous indicators. Its features also belong to national guidelines. The last comparison category addresses the selection of students to enter these programmes. Selection mainly pertains to each university and depends on the students' characteristics. Another reason encouraged the researcher to place this comparison category in the last place: universities cannot choose a good candidate without knowing what kind of programme they are choosing the student for. The last section of this chapter triangulates the national data and international guidelines of quality.

7.1. TEACHER EDUCATION INSTITUTIONS AND PATHS (CC. 6)

Following the general plan of the thesis, the first comparison category to be analysed in this section is related to secondary teachers' initial education institutions and paths. It has been claimed, in many parts of the world, that teachers' initial education institutions are still lacking adequate plans for delivering high-quality education for teachers (Townsend and Bates, 2007). Institutions all over the world, including China and Spain, are trying to improve this impression and are constantly changing. However, the changes are, most of the time, slower than they should be. This lack of connection is usually obvious in the most stable components: institutions and paths.

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7.1.1. INSTITUTIONS AND PATHS (P. 17)

The first table of this comparison category, Table 7.1, belongs to Parameter 17 and tackles national structures and institutions. It aims to understand the comprehensive work and general structure of universities. It displays convergences and divergences regarding the most general features of secondary teachers' initial programmes.

Table 7.1: China-Spain secondary teachers' initial education: institutions and paths

Indicators	China	Spain
Kind of institution	Comprehensive universities Normal universities Junior college (2 to 3 years)	University
Length	Most common concurrent paths: 4-year undergraduate. 4-year modularized 4-year integrated (double degree) Consecutive: 4+X (X=0,1,2)	1-year Master's (+4-year degree)
Paths	Up to the university: Mixed model/consecutive/ concurrent Most common in Normal universities: concurrent	Consecutive
Alternative paths	Yes. External assessment.	No
Flexibility of the system	Very flexible	No flexibility

Source: Researcher's original compilation from MOE (2012b, 2012c), MECS (2007c) and national legislation and authors cited in Section 5.1

The first divergence concerns variety. On one side, as occurred when analysing several indicators in general education structure, variety is the word that can best define the structure of Chinese teacher education. On the other side, Spain has only one path and only one type of institution to prepare teachers. After the Law on Universities (2007), flexibility and freedom for universities increased, allowing universities to describe and define their own degrees. These proposals are later approved by ANECA. However, the legislation only allows secondary teachers with a Master's degree to work in secondary education; hence the Master's is the only path.

Compared to the previous system, having a secondary teachers' education Master's is a constructive progress but some negative consequences of being a unique path remain. A qualification which does not integrate previous informal and formal experiences into the teachers' education programme lacks the capacity to attract experts in other fields and shield schools from their expertise and ambition. This system, alongside the low status of teachers, has led to a selection process where candidates often see the Master's as a 'last choice' rather

than an opportunity. Also recognizing informal experiences would help enrich Spanish schools and connect initial and continuous teacher education (Marcelo, 2009).

Asian countries long ago began to move teacher education from pedagogical institutions to comprehensive colleges and universities (Imig and Imig, 2007); this is probably one of the reasons why Chinese institutions offering teacher education are vastly diverse. Normal and comprehensive universities are the main institutions, with junior colleges to help cover the vast Chinese need for qualified teachers, mainly in rural areas or for lower levels.

On one hand, in China, the flexibility of teachers' initial education with its numerous internal and structural paths (having as a basis a 4-year undergraduate degree) allows universities to decide their own programmes. It is very typical to find secondary teachers who have been trained for four to six years. The length does not depend on the region or the local administration. It is possible to find differences in the same region, the same county and even the same university. Definitely, China has a mixed model and flexible paths as encouraged by several international organizations and authors (OECD, 2005a, 2009a; Manso and Valle, 2013).

On the other hand, besides university degrees, the abovementioned exam to enter the profession is also applicable to secondary teachers. This alternative path is non-existent in Spain, where the only path is consecutive and takes place in universities. Spain maintains a traditional concept of institutions that keep sciences with sciences, pedagogy with pedagogy and only interact for a year (the Master's). It seems that Spanish universities have such compartmentalized structures that coexistence seems a utopia, ignoring other interrelations among faculties which may be enriching. As affirmed by Gray, "We need common institutions in which many forms of life can coexist" (Gray, 2000, cited in Bates, 2007, p. 135).

According to Estebaranz (2012), the faculty of education is the least prestigious faculty of the university. Perhaps the historical Spanish debate between the relevance of knowledge and pedagogy for secondary teachers (Egido, 2011), locking faculty staff and students into different classes and faculties, is where the low prestige of Spanish education faculties is rooted. Raising teachers' prestige may also start raising their institutions' prestige.

The fact that secondary teachers' education is the only teaching degree organized as a Master's, differentiated from early childhood and primary education, both implemented at

undergraduate level, is another sign of the Spanish traditional conception (Egido, 2011). The divorce between academic areas and the traditional model instituted in Spanish universities has also led to a deep difficulty in creating a specific undergraduate degree for secondary teacher education (Egido, 2011; Tiana, 2011a), even when many national specialists prefer simultaneous systems as a way to improve secondary teachers' identity and professionalization (Marcelo, 2009).

In this line of thought, Tiana (2011a) and Bolívar (2006a) also stress that the Master's can give students the knowledge or prepare them for the current challenges of education, however it is late to start building a teacher identity and time is short. Spain is taking the risk of having most of its secondary teachers feeling like physicists or mathematicians, but working as teachers.

It is accurate to sustain that the main conclusion of the information exposed in Table 6.15 is that Chinese teacher education is far more flexible than Spanish. However, this does not mean, per se, that the adaptation of such flexible processes would have a positive impact on Spanish teachers' initial education. Making policies to reach and adhere to certain quality standards entails taking a look in more detail at areas such as curriculum design.

7.2. CURRICULUM DESIGN AND ORGANIZATION (CC. 7)

As with the entire project, the comparison category regarding secondary teachers' initial education curriculum and organization is categorized from general to concrete, in four parameters: (1) national curriculum design and organization, which depend on the internal and nationwide structure of the chosen countries; (2) extra curriculum not related to the specific degree, which refers to compulsory subjects that do not belong to teacher education; (3) credit distribution, which tackles the organization of both specific and non-specific subjects; and, (4) practicum, which analyses this part of the programmes as key to designing high-quality education plans.

7.2.1. NATIONAL CURRICULUM ORGANIZATION (P. 18)

The indicators of this parameter encompass the general guidelines of teacher education legislation in each country. Both countries have a national act that delimits the basics of teacher education programmes; however, there are three main differences in their proposals. First, the Chinese plan was proposed in 2012, five years later than the Spanish disposition,

therefore even if the universities have adapted their programmes to this proposal, the first group of graduates had still not come out of the universities at the time of writing this thesis.

Second, the character of Chinese legislation regarding teacher education is less strict than the Spanish. It does divide the curriculum into learning areas, but the suggestions for modules and credit distribution is generic, leaving universities the freedom to organize the total credits. Third, the Chinese proposal is completely conceived for concurrent models (3- and 4-year programmes), while the Spanish one is completely designed for consecutive models. The details can be contrasted in Table 7.2.

Table 7.2: China-Spain secondary teachers' initial education: organization of the national curriculum

Indicators	China	Spain
General/National curriculum proposal	Yes (2012)	Yes (2007)
Total credits or hours	Depends on the model. <u>3-year vocational programmes</u>: at least 12 credits (216 hours) on teacher education curriculum + 18 weeks for practicum <u>4-year undergraduate degree:</u> at least 14 credits (252 hours) on teacher education curriculum + 18 weeks for practicum 1 credit= 18 hours	60 credits (of which at least 16 for the practicum). Around 1100 hours for pedagogical learning + practicum. 1 ECTS = 25 hours including workload.
Modules	<u>5 learning areas:</u> - Child development and learning - Secondary education foundations - Secondary education disciplines and activities guide - Mental health and moral education - Ethics and professional development <u>Practicum</u>	<u>3 learning areas and blocks:</u> **Generic** - Learning and personality development - Educational processes and contexts - Society, family and education **Specific** - Complementary subject-teaching knowledge - Specific subject learning and teaching

		- Teaching innovation and introduction to education research **Practicum** Specific subject practicum and final Master's thesis

Source: Researcher's original compilation from MOE (2012b) and MECS (2007c)

In Spain, the design of the secondary teachers' curriculum proposed for the Master's is, doubtless, an improvement on the previous secondary teacher education curriculum. The distribution of pedagogy credits is obviously very different between the most common Chinese path (concurrent) which can distribute them along three or four years, or when the Chinese model follows a consecutive path, commonly along a 2-year Master's (as in Beijing Normal University) and the only Spanish path (consecutive) which must organize the curriculum into only one year.

Apparently, the official proposal for minimum pedagogical classes takes, in hours, much more time in Spain than in China (252 hours in four years versus 1,100 hours in one year – out of which at least 400 for the practicum). However, the Chinese credits do not include some of the workload measured in Europe. Generally, in the Spanish university, it is considered that most of the time is invested outside the classroom, taking other learning activities such as lectures, seminars, projects or practical work. China only measures classroom time. Due to this difference in the distribution and taking out the hours for the practicum (as in the Chinese proposal) the gap is not as large as it initially seems. Supposing that all classes have 50% of the work outside the classroom workload, the Spanish students still have around 100 hours more than the Chinese. If raising the percentage and assuming that the outside workload for all the classes is 65%, Spanish total class time would be only 6 hours below the Chinese programme.

The difference in the pedagogical distribution is highly linked to the model, since Chinese students while learning pedagogy must also learn their own speciality, which Spanish students learned during the four preceding years. The number of pedagogical credits also shows that China, like Spain, gives more attention to subject knowledge than to didactics and pedagogy. More detail about this distribution is shown in Chart 7.1.

It is widely accepted that pedagogical knowledge should be a key component of secondary teachers' education as a way to learn how to deal with student diversity (Valle,

2012). This idea is increasingly taking part in the role of teachers, since classrooms and students are progressively becoming more heterogeneous (Vinuesa Angulo, 2001; Estebaranz, 2012) and teachers need the tools to deal with a complex situation of coexistence in schools and classrooms.

According to Darling-Hammond (2006), "Teachers need not only to be able to keep order and provide useful information to students but also to be increasingly effective in enabling a diverse group of students to learn ever more complex material" (p. 1), and "given the wide range of learning situations posed by contemporary students—who represent many distinct language, cultural, and learning approaches— teachers need a much deeper knowledge basis about teaching for diverse learners than ever before and more highly developed diagnostic abilities to guide their decisions" (p. 5).

The distribution of the modules in learning areas is, in general, analogous, and even if the Chinese distribute the classes across five learning areas and the Spanish three, the core contents are similar. The essential difference, which is a constant in this comparative study, is the inclusion of a learning area regarding "mental health and moral education" in the Chinese plan. In Spain, values and emotional education are not described in the subject plan, but in the general objectives of the Master's, understanding these matters as working across all classes. The inclusion of this specific area does not mean that Chinese general classes lack this objective, since most of the classes' specific programmes add as general premises the values and morals of Chinese culture, but it shows the importance of moral behaviour in Chinese modern culture.

7.2.2. EXTRA CURRICULUM NOT RELATED TO THE SPECIFIC DEGREE (P. 19)

Besides pedagogical and subject knowledge credits, a third component is included in all Chinese universities: common components not only for teaching degrees but for all degrees. These extra subjects are generally not present in Spanish programmes, which sometimes have basic common subjects for degrees in the same field (for instance mathematics and physics), but do not have a similar basis with other degrees. Generally, these subjects are as displayed in Table 7.3.

Table 7.3: China-Spain secondary teachers' initial education: common subjects

Indicators	China	Spain
Compulsory credits of basic/general knowledge (not related to pedagogy or the subject)	Yes	No
Military training	Yes (at least 14 days: 2-3 weeks)	No
English language	Yes	No
National culture and heritage	Yes	No
ICT skills	Yes	No
Politics/government thinking	Yes	No

Source: Researcher's original compilation from MOE, National Commission for Development and Reform and the Ministry of Finance (2012b), Yu (2013), ECNU (2014a, 2014b, 2014c) and MECS (2007c)

It is largely assumed, in Spanish universities, that general knowledge has been acquired before entering any higher institution, hence there is no need to invest students' and teachers' time in deepening general knowledge. In contrast, Chinese universities, as in Hainan Normal University, Zhejiang Normal University and East China Normal University, can dedicate around 30% of their degrees to common classes, mainly focusing on English language and political thinking. Other classes included in this category are Chinese cultural heritage, military training (compulsory in all universities) and computer skills.

Regarding this last component, ICT knowledge, Professor Valle (2012) notes the need to prepare teachers to deal with innovation and technology. Looking beyond main teacher education classes, it is possible that general knowledge, to which Chinese universities dedicate more than a year of their complete programmes, could have positive results in Spain. It is inescapable in this century that English language and computer skills are basic to our globalized world, but they are not compulsory in university programmes whatsoever.

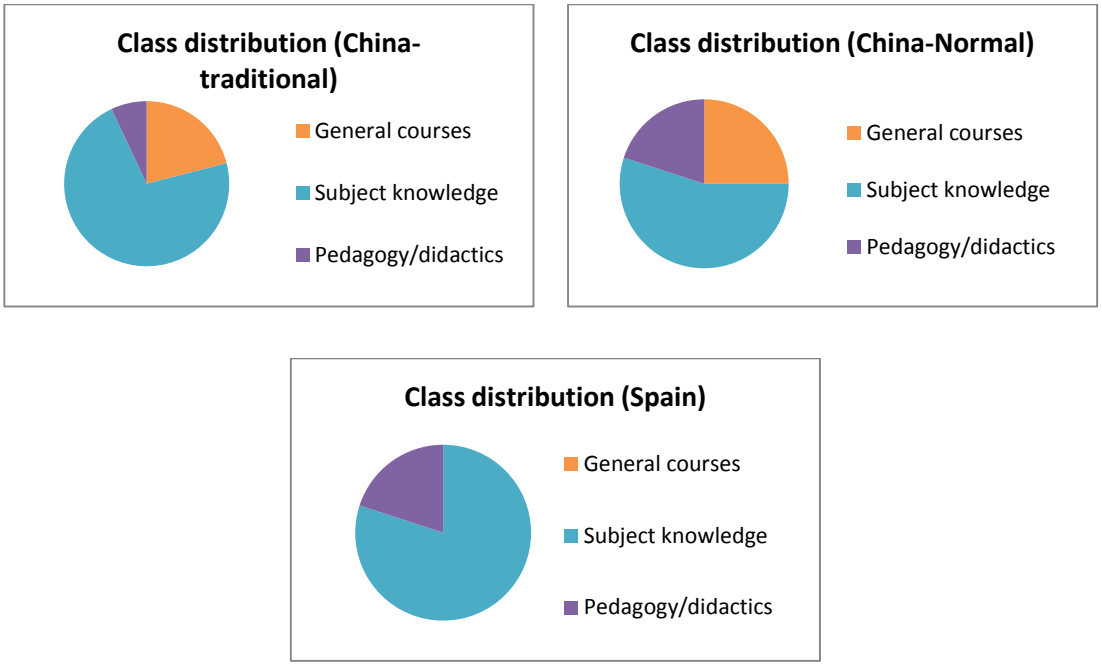
ICT is only a small portion of what teachers are expected to manage, besides their subject knowledge and pedagogy, in every educative context. The contemporary role of teachers is shifting towards being a teacher-researcher-guide who enables individual and group research. These essential elements, which in Spain are theoretically covered through the above-explained competencies (developed in one year) may recall that: "Preparing teachers as classroom researchers and expert collaborators who can learn from one another is essential when the range of knowledge for teaching has grown so expansive that it cannot be mastered by any individual and when students' infinitely diverse ways of learning are recognized as

requiring continual adaptations in teaching" (Darling-Hammond, 2006, p. 6). Both ICT and research skills are further tackled in the section on professional competencies.

7.2.3. CREDIT DISTRIBUTION (P. 20)

The specific credit distribution of secondary teachers' curricula displays clear divergences between Spanish, Chinese traditional and non-normal institution programmes and modern and normal universities. A graphical representation is given in Chart 7.1:

Chart 7.1: China-Spain secondary teachers' initial education: credit distribution (%)



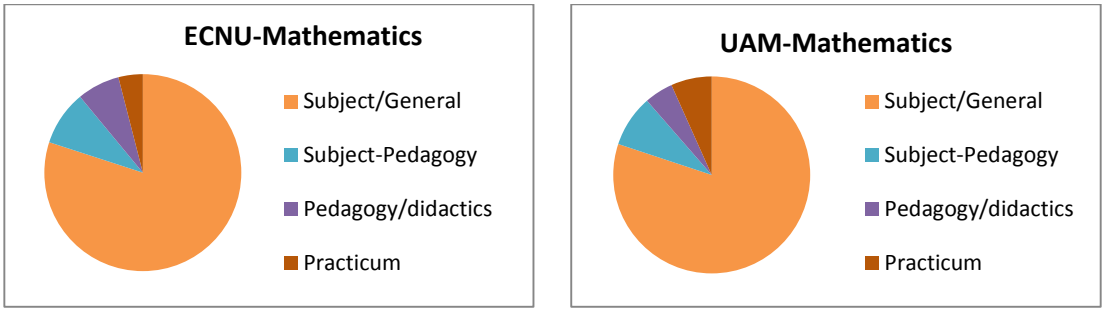
Source: Researcher's original compilation from MOE (2012b), Li (2002 cited in Guo 2005), Song (2008b), MECS (2007c) and national authors cited in Section 5.1

The distribution of subjects is evidently more difficult to compare since each university, in China, has its own programme. According to the analysed studies tackling credit distribution, Chinese universities place most of the credits in subject knowledge, followed by general credits (totalling around 93% of the credits). In spite of numerous criticisms made of the current Spanish model, arguing that teachers' initial education still focuses on subject knowledge and memorization with scarce practical knowledge (Valle, 2012), when comparing with China, the imbalance seems positive, with 13% more credits for pedagogy classes than the Asian country.

Due to the variation among universities, this comparison may seem very wide and does not include new Chinese tendencies to extend pedagogical content, mainly in normal universities. For instance, the three universities mentioned in Section 4.1.5.1, Hainan, Zhejiang and East China Normal University, have broadened pedagogy and teacher education to percentages between 18% and 29% of classes. If including the complete path in both countries (undergraduate degree and Master's in a concurrent system), these percentages are much closer to the Spanish amount of credits (20%).

Aiming to make concrete not only the character of the credits, but the field of distribution, some specific examples were detailed in Chapter 5. The contrast in the data between East China Normal University (4-year pathway) and Autonomous University of Madrid (undergraduate + Master's), in the concentration of mathematics (similar to all three concentrations displayed in Sections 5.1.5 and 5.2.5) is shown in Chart 7.2:

Chart 7.2: Mathematics concentration credit distribution in ECNU and UAM (%)



Source: Researcher's original work from ECNU (2014c) and UAM (2014c)

Both universities share their percentage of subject knowledge, which in China also includes general knowledge, and have a similar percentage for pedagogy of the subject (9% at ECNU and 8.5% at UAM). The most significant differences are found in pedagogy, where ECNU allocates 2.3% more of the credits (7% at ECNU and 4.7% at UAM), and the practicum to which UAM assigns 2.7% more credits than ECNU (4% at ECNU and 6.7% at UAM). However out of the percentage of the practicum in UAM, 2% belongs to the final thesis, which almost levels the ECNU and UAM percentages in real practicum experience.

Tackling the character of the credits, selection is made at two completely different times. In China, 20% of the credits are elective, but this percentage includes pedagogy and non-pedagogy related subjects and are distributed along the 4 years. In Spain, the Master's programme does not usually have any elective classes, since the selection consist in the

concentration itself. Nonetheless the significance of choosing one concentration or another is relatively low in terms of the Master's.

It is pertinent to highlight that the legislation for secondary teachers' education does not include a list of the possible concentrations of the Master's, but universities have adapted their offer to the secondary teachers' working specialities (Tiana, 2013). Because of this combination between education and labour requirements, some universities offer one concentration by working subject, and others have unified subjects in double degrees, such as geography and history or physics and chemistry. These combinations have led to some criticisms, arguing that historians may not know all the contents of geography and vice versa. The results of these differences are still to be seen. In any case, universities' freedom to design their Master's specialities have no legal consequences when opting for a teaching post. The main legal requirement to work as secondary teacher is having the Master's, whatever the concentration (Tiana, 2013).

7.2.4. PRACTICUM (P. 21)

Not only can the percentage of the pedagogical course be improved in both countries, but also the relationship among the different modules. A more integrative system with combined modules could be a solution to avoid "The weaknesses of traditional program models that are collections of largely unrelated courses reinforce this low regard [towards teachers and the teaching profession]" (Darling-Hammond, 2006, p. 1). In this sense, the practicum is the stage in which the courses are unavoidably related. Table 7.4 displays the characteristics of the practicum in both countries

Table 7.4: China-Spain secondary teachers' initial education: practicum

Indicators	China	Spain
Practicum is compulsory	Yes	Yes
Amount of credits	At least 18 weeks. Normal undergraduate: at least 1 semester. Master's: at least six months.	At least 16 credits
Types of practicum	Depends on the university. Always in-class teaching, very often also observation practicum.	Depends on the university but compulsory to have in-class practicum + final thesis

Schedule for practicum	Depends on the university. Sometimes distributed between the last two years. Most commonly the first semester of the last year.	Depends on the university. Distributed between first and second semester (if there is an observation practicum) or all in the second semester

Source: Researcher's original compilation from MOE (2012b), MECS (2007c) and national plans and authors cited in Sections 5.1 and 5.2

The practicum is another key element in teachers' initial education. Both countries have a period of practicum included in their programmes. However, the length of the practicum shows deep divergences. In China, legislation suggests at least 18 weeks (which corresponds to one semester in universities), as the time universities at undergraduate level dedicate to teaching practice. In of Master's programmes (2 years), the time is six months. In Spain, the practicum usually takes between 6 to 9 weeks, but calculated in credits, not effective hours, which creates some differences among universities. In contrast to the plan for pedagogical education, where Spanish students have more hours, the practical experience is, officially, further encouraged in China. In theory, the Chinese time for practicum is double, in both cases, the time spent by Spanish students inside a real classroom. When included in a 2-year Master's, this can even be triple the Spanish time.

Although this is the new path established and promoted by recent Chinese proposals, in most universities practicums undergo difficulties that materialize in uneven programmes and distortions. This situation raises difficulties similar to the old CAP in Spain. As noted by several researchers, such as Gu (2014), the real time in teaching practices usually ranges between 6 to 10 weeks (which would equal the time in Spain), and the other credits and tasks are a mere formality.

In Yin and Tang's (2014) analysis, normal universities have better coordinated and longer programmes, while colleges remain behind, proposing uneven experiences. Other critics tackling the time of the practicum note that most universities arrange practicums during the eighth semester, when students are taking degree examinations and trying to enter the labour market, so practice is not conceived as the most serious part of their learning process; the organization of the practicum is considered to be too fragmented and sometimes has no guarantee of real practice time. Schools are habitually too concerned about students' academic achievement and have to deal with social, family and school pressure, therefore tutors are not willing to take responsibility for student teachers. As a consequence, many

practices consist of observation, sporadic lectures or correcting homework. Yin and Tang also stress the need to broaden the contents of the practices, usually focusing on knowledge and the use of textbooks.

This component has also received many criticisms in Spain due to a lack of criteria for designing the practicum or choosing the schools, and a wide and uneven variety of practicums (Manso and Valle, 2013). Chinese universities design their practicum along their own lines of organization and include in-class teaching mainly in the last or two last years, accompanied by a final thesis. The Spanish system is similar, but shorter. It does have a compulsory in-class teaching practicum and a final thesis, and some universities divide the practicum into two periods, in the first and second semester.

The consecutive models, such as the Spanish, not only affect teachers' identity but also the organization of the practicum, making it less full (Manso and Valle, 2013). There are fewer possibilities to design a coherent practicum, experience must be acquired in a short period of students' academic time, and there is less time to reflect about that experience and mature the core ideas and almost no chance to try to improve in another practicum. Besides, the range of classrooms which the future teachers can enter is exiguous.

The inclusion of longer or multiple practicums requires the collaboration of several agents, such as university and school tutors and secondary school teachers, among others. It requires time and resources and a detailed plan for each type of practicum. If not well-planned, it can be seen as intrusive in the schools or disappointing for the students. Still, "the enterprise of teacher education must venture out further and further from the university and engage ever more closely with schools in a mutual transformation agenda, with all of the struggle and messiness that implies" (Darling-Hammond, 2006, p. 3).

7.3. TEACHERS' PROFESSIONAL COMPETENCIES (CC. 8)

The notion of education as a reflective practice where knowledge is no longer compartmentalized is taking a primary role worldwide. As Perrenoud affirms, "education, if compulsory or exclusively focused on knowledge, can only randomly transform practice" (Perrenoud, 2004b, p. 172), therefore it is necessary to transform education. This section addresses the trend of competencies in teachers' role and teacher education. It merges two steps: the first (7.3.1) addresses competencies general and official state in each context, while the second (7.3.2-7.3.6) directly analyses the use of competencies in each country and the

European Union based on their own documents. The divisions of competencies into sections have been done according to the main content of all of the documents, designing a categorization which includes all the competencies cited in the official Chinese, Spanish and European files.

7.3.1. TEACHER EDUCATION COMPETENCIES AND LEGISLATION (P. 22)

This parameter frames the general notion and status of competencies in each of the countries and the European Union. It sets the groundwork to further understand the specific proposals of each country. The concept of competencies is still vague, and Asia and Europe have developed it under different perspectives. The notion is much more compartmentalized and exhaustive in Asia and more transversal and comprehensive in Europe. However, most of the difficulties are found, in both contexts, when applying competencies to teaching practices. It is already a first step for plans to be designed in terms of competencies and that countries have already released official documents tackling similar goals for teachers' practices and/or education. The general guidelines in this matter are listed in Table 7.5.

Table 7.5: China-Spain secondary teachers' initial education: legislation and professional competencies

Indicators	China	European Union/Spain
Reference to teachers' competencies in national/supranational legislation	Yes (2012)	Yes **European Union:** last published 2013. **Spain:** Order of the Master's, 2007
Main categories of teachers' competencies	Competencies for teachers - Professional philosophy and ethics (attitudes) - Professional knowledge and expertise (knowledge) - Professional competence (skills)	Competencies for teachers: **European Union:** - Knowledge and understanding - Skills - Dispositions (beliefs, attitudes, values) **Spain:** Only for teachers' education

Teachers' initial education is designed based on competencies	No, but national documents establish that competencies will be used to design teacher education	**European Union:** Not for teacher education, but for teacher profile. **Spain:** Yes. (Order from 2007)
Main categories of teachers' initial education competencies	--	**European Union:** Not exclusive for initial teacher education **Spain:** 11 competencies not categorized

Source: Researcher's original compilation from MOE (2010c), MECS (2007c) and European Commission (2013b)

Spanish teachers' initial education programme is designed through a competency profile, but this is not the case with Chinese programmes. In China, competencies belong to a national framework which have to be included as transversal tools. They are not exclusive for secondary teachers' initial education programmes, but cover the whole career. A similar reference is found in European literature, not specifically for teachers' initial education programmes or focusing exclusively in secondary education teachers, but for teachers as a collective and for their entire career.

Hence the comparison in this section tackles Chinese and European references for teachers' competency profiles, as general frameworks. Still, Spanish secondary teachers' initial programme competencies are designed in line with the European guidelines, hence are also included in the analysis. Nonetheless it is important to note the difference between the Spanish national proposal, regarding teachers' education, and the European and Chinese proposal, regarding teachers' careers.

Both the Chinese and European last references about teachers' profiles are quite recent and were published only one year apart (see Sections 5.1.6 and 5.2.6). The guidelines divide teachers' competencies into three categories, named differently but including approximately similar components: knowledge, skills and attitudes.

Some convergences and divergences are found in the documents, mainly because of the extension of the Chinese reference, longer than the European, and other divergences clearly display basic variances. While the European profile aims to be wide enough to encompass the needs of 28 countries, the Chinese one can deepen and detail competencies with the

security of focusing on national harmonization, one culture, language and country needs. The contrast of the competencies is shown in the following tables.

7.3.2. POLICIES, POLITICS AND CAREER UNDERSTANDING (P. 23)

Tables 7.6-7.10 show the equivalence and perspective of each country, and the European Union, regarding professional competencies for teachers. The tables are classified into five categories, aiming to group all the variables from different documents and summarize the most important features. The numbers accompanying each component refer to the national and supranational documents discussed in Section 5.1.6 and 5.2.6.

Once more, the organization runs from general to specific, hence the first table starts with competencies referring to policies, politics and career understanding. This section shows how each country understands teachers' responsibilities as social and political agents and what each country expects from their teachers across their whole careers. The specifics are presented in Table 7.6.

Table 7.6: Professional competencies in China, the European Union and Spain: policies, politics and career understanding

	China	**EU – Spain**
Official policies	(Art. 1, 11) Party and State education policies	(Art. 6, 21 - EU) Educational and government policies (Art. 9 - SP) Legislation of the education system
Political guidelines	(Art. 14, 21, 29, 45, 51, 52) Communism. Principles, practices, methodologies and participation in Communist Youth League and Young Pioneers	(Art. 27 - EU) Democratic attitudes and practices, as European citizens (diversity + multiculturalism)
Professional development and lifelong learning	(Art. 2, 63) Professionalism, career aspirations and professional development plan	(Art. 25 - EU) Ongoing learning and professional improvement

Source: Researcher's original compilation from MOE (2010c), MECS (2007c) and European Commission (2013b)

Under this classification, the first group, policies, politics and career understanding, already shows great differences. Chinese competencies refer to Communist Party values, principles, methodologies and practices, linking education to Chinas' political organization. Another fact directly linking both fields is the promotion of students' participation in the Communist Youth League and the Young Pioneers.

On the other hand, the European Union and Spain stress educational and government policies. Not as concrete as the Chinese proposal, the European Union does not address specific political thinking but a certain political organization, directly linking education to national and supranational values, such as democratic attitudes and practices and human rights. This difference between the Chinese and European and Spanish policies only confirms what is found in all of the legal texts explained during the research.

Paradoxically, the differences in underlying values, far from being understood as a divergence, must be understood as a convergence from an international point of view. According to Caena (2011b) "it ought to be assumed that any teaching, learning or training practice represents a value choice about key issues, mediated by institutional trends and external regulatory mechanisms; the responses to these key issues thus imply decisions linked with beliefs, priorities and ideals, as well as tendencies to maintain or change the present social order" (Caena, 2011b, p. 1).

The other difference tackles professional development, on which the Chinese proposal places more emphasis than Europe or Spain. China underlines teachers' professionalism and career aspirations, and encourages their teachers to design their own professional development plan, stressing in turn a lifelong learning paradigm. It does not only make reference to lifelong learning, it also aims to inspire teachers to reflect about their own future.

The European document does not include such planning, but stresses ongoing learning and professional improvement as a basis for lifelong learning and explains in its conclusion, "The ultimate purpose of systems of teacher education and professional development must be to support learning by students. Enabling all teachers to develop their competences means stimulating teachers' engagement in long-life learning careers, assessing the development of teachers' competences, and providing appropriate and relevant learning opportunities for all teachers" (European Commission, 2013b, p. 43).

7.3.3. TEACHERS' KNOWLEDGE (P. 24)

As reiterated throughout the thesis, most countries design teacher education programmes separating teachers' subject knowledge and pedagogy. However, new paradigms tend to connect both components, and to conceive of teaching as a complex profession which needs complex constructs of knowledge of diverse types. This parameter analyses the main modules of knowledge, grouped into specific competencies, which are later complemented by the attitudes, skills and social role of teachers.

Table 7.7: Professional competencies in China, the European Union and Spain: teachers' knowledge

	China	**EU – Spain**
Subject / curriculum knowledge	(Art. 26, 27, 28) Contents, principles, skills of own subject and other disciplines	(Art. 1, 2, 4, 22 - EU) Contents, objectives, principles, skills of own subject and its relationship to other disciplines (Art. 1 - SP) Contents
Pedagogy / methodology	(Art. 10, 12, 13, 20, 30, 31, 41-44, 46, 48, 49, 50) People-centred, morals, creativity, independent learning, inquiry, debate and participation, transversal activities	(Art. 2, 3, 10, 20, 23, 24 - EU) Reflective, metacognitive, interpersonal individual and community professional skills, transferable skills (Art. 1, 6 - SP) Autonomous learning, learning with others, decision-making, autonomy, personal initiative
Educational foundations	(Art. 22, 24, 32, 49, 50, 51) Psychology, physical, mental development, learning characteristics, moral and ethical development	(Art. 5, 9, 22 - EU) Intercultural knowledge, history, philosophy, psychology, sociology (Art. 7 - SP) Social skills and ability to encourage learning and coexistence
Group management	(Art. 25, 43)	(Art. 10, 14 - EU) (Art. 4 - SP)

Evaluation methods	(Art. 54, 55, 56) Multiple evaluation methods, multiperspective and process of student development, students' self-evaluation and teachers' self-evaluation	(Art. 11, 15, 28 - EU) Monitoring, adapting and assessing teaching/learning objectives and processes. Critical attitude towards teachers' own practice. (Art. 2, 8 - SP) Teaching/learning progression
Education context, design and organization	(Art. 23, 38-40) Secondary school world, designing teaching programmes and helping students to design a personalized learning plan	(Art. 6, 12 - EU) Planning, managing and coordinating teaching (Art. 2, 8 - SP) Planning and developing teaching and learning progression, formal and informal activities
General knowledge and current situation	(Art. 34-36, 53) Knowledge of natural and social sciences and humanities Art Current situation of Chinese education Responding to emergencies	(Art. 10 - SP) Understanding and analysing historical features, current situation, perspective and interaction with social reality (Teaching profession)

Source: Researcher's original compilation from MOE (2010c), MECS (2007c) and European Commission (2013b)

The second category, teachers' knowledge, encompasses more convergences than divergences, and the divergences refer to subtle philosophies underlying education in each context. Subject knowledge is encouraged in both countries, but China asks their teachers to know and be able to teach other subjects besides their speciality, while in Europe the key is not to know other subjects but to know the relationship of their own subject to other disciplines. This is a reflection of the internal thinking of each system, while one expects their teachers to know, the other expects their teachers to look for relationships, which unavoidably means to understand and to categorize.

This affirmation does not mean that the Chinese system does not promote relationships and generalization of contents, but the emphasis is not as strong as in Europe. This affirmation is confirmed by the fact that the methodology and pedagogy in China promote certain aspects, such as 'transversal activities' while Europe promotes 'transferable skills', or

China stresses creativity, moral education, independent learning, debate and participation, while Europe highlights individual reflective, metacognitive and interpersonal skills.

In addition, regarding methodology, the teaching philosophy cannot be detailed by the European Union since its proposal encompasses numerous countries. However, as the conclusion of the European document stresses, "There are as many different kinds of teaching as there are teachers; each of these has the potential to be of high quality; some important aspects of teachers' professional work cannot be easily defined or assessed. Diversity in teaching can be valued as a strength" (European Commission, 2013b, p. 43).

Convergences are obvious in educational foundations, as well as in group management. Guidelines in these aspects are very similar, giving a highly relevant role to psychology and physical and mental development. The most remarkable divergence is the stress of Europe on intercultural knowledge, while China in turn focuses on moral and ethical development.

Regarding evaluation methods, China offers a more concrete description of what is expected from teachers and their assessments. Chinese competencies accentuate evaluation methods under a multiperspective evaluation and the evaluation of the process. They also encourage teachers and students to evaluate themselves. In contrast, in Europe, evaluation mainly refers to teaching and learning objectives and processes, and highlights the importance of adapting both the objectives and the processes, probably referring to continuous evaluation, not only for students but of the teachers' performance. In addition, in Europe teachers are asked to have critical attitudes towards their practices, but students' self-evaluation is not mentioned. These underlying perceptions match the Chinese and European cultures and their emphasis on teachers' adaptation in Europe or students' efforts in China.

As occurs with teachers' professional development, China encourages their teachers to help students develop their own learning plan, while Europe does not mention this competency. Both documents expect teachers to plan and manage their classes; in addition, Spain also enhances the development of formal and informal activities as professional competencies.

It is obvious that all these proposals place great emphasis on knowledge, but, maybe because the Chinese document is more concrete, knowledge and skills regarding two fields are stressed in Asia and not in Europe: art appreciation and knowledge, and teachers'

response to emergencies. While these two dimensions are not specifically tackled in Europe, China includes them in "professional knowledge and expertise" and "professional competence", respectively.

Other specific components of what this study has labelled "general knowledge and current situation", not mentioned in Europe, are knowledge of natural and social sciences and humanities. This also includes a current perspective on Chinese education. In turn, Europe tackles historical and current features of the teaching profession, perspective and interaction with social realities, not stressed in the Chinese proposal. This fact confirms the Chinese emphasis on knowledge, mainly in sciences. It also stresses the European concern about relationships between fields, but not the stress of other disciplines, promoting more concrete profiles.

7.3.4. TEACHERS' ATTITUDE AND DIVERSITY (P. 25)

Current societies intensely focus on teachers' character and attitudes as main personal features to become a better teacher. In Europe, the requested attitudes do not any longer or only belong to classroom needs or group dynamics, but to individual circumstances. In this context, education is centring its efforts on offering personalized experiences trying to develop all children's possibilities and to understand cultural diversity as a positive aspect of education while promoting inclusive dynamics for all. At the same time, China is progressively trying to balance frontal pedagogies, large classes and academic results with individual needs, ethnic diversity and, in certain schools, the integration of students with special needs. These trends of both countries essentially belong to teachers' approaches towards students and are shown in Table 7.8.

Table 7.8: Professional competencies in China, the European Union and Spain: teachers' attitude and diversity

	China	EU – Spain
Teachers' personal attitudes	(Art. 2-4, 15-19) Love for education, professional identity, role models, patience, caring, optimistic, neatly dressed, healthy, polite	(Art. 25, 28, 30 - EU) Disposition to change, flexibility, critical attitudes to their own practice, sense of self-efficacy
Teachers' attitude towards students	(Art. 6-9) Caring for, respecting and trusting students, their interest and rights, equal treatment, no irony, sarcasm, corporal punishment	(Art. 26, 27 - EU) Commitment to promoting learning in all students and promoting democratic values (Art. 5 - SP) Equity, emotional and civic education, equal rights, respect for human rights
Students' diversity	(Art. 7, 49) Understand diverse needs and activities according to students' world, life and values	(Art. 7, 21, 27 - EU) Inclusion and diversity, appreciation of diversity and multiculturalism, multilevel dynamics with cross-influences. (Art. 2, 4 - SP) Students' previous level, orientation and adaptation to students' diversity

Source: Researcher's original compilation from MOE (2010c), MECS (2007c) and European Commission (2013b)

Another divergence between these documents is the attitudinal requirements for teachers and their appearance. While European proposals do not make any reference to external appearance, China asks for teachers who dress appropriately, are healthy, use correct language and are polite. In Europe these values and acts are commonly assumed, hence not being highlighted in legislation.

The Chinese proposal encourages teachers to be role models, loving education, and stresses the importance of teachers' professional identity and uniqueness, but the European guidelines do not mention teachers as role models or the notion of teachers' identity. The

requisites for personal attitudes fall, in Europe, on the side of flexibility, self-critical attitudes and sense of self-efficacy.

Teachers' attitudes towards students are vastly detailed in China, while in Europe this is probably considered to be included in the general values of teachers. China explicitly encourages their teachers to be caring, respectful and trusting with their students and bans irony, sarcasm and corporal punishment. In Europe, teachers' attitudes towards students focuses on teachers' commitment to promoting learning for all, equity, emotional and civic education, and respect for human rights, among others.

These fundamental values have a great impact on the way teachers treat and understand diversity in their classrooms. China stresses the need to understand different needs according to students' worlds and values, while Europe highlights several key concepts: inclusion, appreciation of diversity and multiculturalism and adaptation. In this case, Europe shows, at least in official documents, an open and positive attitude towards diversity, understanding differences as enriching for both students and teachers, while China deals with differences with respect but in a less inclusive way.

7.3.5. BASIC SKILLS (P. 26)

Current societies are extremely demanding of information and constantly undergo fast changes in communication and technologies. Official structures and programmes have serious difficulties following these dynamics since authorized channels often require multiple bodies to be involved and process are rather slow. Nonetheless, in this context, teachers have to keep coping with their students' needs, hence they must understand and get involved with the most recent changes. Professional competencies regarding the development and acquisition of basic skills is stressed in all the proposals at national and supranational level.

Table 7.9: Professional competencies in China, the European Union and Spain: basic skills

	China	EU – Spain
Technologies	(Art. 37) Adapt educational contents and methodologies through ICT knowledge	(Art. 8, 13 - EU) Effective use of technologies (Art. 3, 8 - SP) Search, obtain, process and communicate information (verbal, print, audiovisual, digital and multimedia). Application of this information to the teaching/ learning process for the specific subject Teaching/learning innovation
Research skills	(Art. 33, 61, 62) Research methods and strategies for teaching and learning in specific subjects, research to improve education and solve specific problems	(Art. 16, 17, 25 - EU) Research for professional decisions and teaching/learning improvement. (Art. 3, 8 - SP) Transform information into knowledge and participate in research

Source: Researcher's original compilation from MOE (2010c), MECS (2007c) and European Commission (2013b)

Regarding basic skills, both Chinese and European plans include the use of technologies and research skills, though with few hints. On one hand, China directly underlines the adaptation of learning methodologies and contents using ICT, while the European mention is vague and general, referring only to "effective use of technologies". This divergence in the emphasis on ICT it is not due to its lower relevance in the European classroom but due to the character of the document, wider in the case of the European Union. In Spain, ICT is not directly mentioned as a competency by itself but as a tool to access and transmit knowledge. It is acceptable to state that technologies are taking a primary role in schools and education worldwide, mainly in innovation and to improve teaching and learning process.

On the other hand, research is mainly focused on specific subjects in China, such as strategies for teaching and learning, as it is in Europe, while Spain emphasizes the use of ICT to transform information in knowledge and to carry on research, adding a practical

component. In this matter, it is relevant to remember that both China and Spain includes ICT and research strategies in their specific teacher education programmes. China adds ICT skills to the general classes and research subjects in the Bachelor's programmes. In this line, Spain's Master's has a specific module called "innovation and introduction to education research".

7.3.6. SOCIAL ROLE (P. 27)

The last parameter of this comparison category refers to the role of teachers in their own communities and schools. As explained in Section 4.3.2, the notion of community and social networks is different in Europe and in Asia, as the way Europeans and Asians conceive working relationships differs. A tight relationship among the members of the same community is common in China, where people strongly care about image in society and work for social harmony under a centralized political system. Europeans, on the other side, have a more individualistic view of society and their life, and look for democracy and social participation under a combination of autonomy and democracy. Some of these differences shape the competencies stressed by each entity regarding teachers' social role, as shown in table 7.10.

Table 7.10: Professional competencies in China, the European Union and Spain: social role

	China	**EU – Spain**
Collaboration with the community and colleagues	(Art. 5, 47, 57-60) Team spirit, active collaboration and exchanges, teachers' relationships with students, colleagues (to improve practice) and parents School-community cooperation	(Art. 18, 19, 29 - EU) Team-working, collaboration with colleagues, parents and social services, social and political interaction with educational stakeholders, negotiation skills (Art. 2, 8, 11 - SP) Collaboration with other teachers, and parents Mentor students in a coordinated manner.

Source: Researcher's original compilation from MOE (2010c), MECS (2007c) and European Commission (2013b)

This last parameter of the Comparison Category 8, referring to social collaboration and implication, includes some skills in Europe that are not mentioned in Chinese documents, such as collaboration with social services, negotiation skills (social and political interactions with multiple educational stakeholders, actors and contexts) and teachers' adaptation to education contexts affected by multilevel dynamics with cross-influences. These skills confirm the trend started a decade ago by the European Commission, when affirming that teaching is "a profession based on partnerships" where teachers must "work collaboratively in partnership with schools, local work environments, work-based training providers and other stakeholders", it also determines that teachers "work with and in society" (European Commission, 2005, p. 3-4). Another divergence is rooted in Chinese and European conceptions of society. While European documents stress political interaction, the Chinese do not mention this type of relationship.

Following with divergences rooted in social notions and culture, in China, collaboration is mainly stressed among colleagues, understanding other teachers as sources of knowledge and experience. This is another proof of experienced teachers' high esteem and value. Chinese teachers' competencies also display a greater concern about teachers helping students to develop good relationships with the community, confirming the cultural trends of Asian societies and schools' interconnection within the community (not mentioned in Europe).

7.4. TEACHERS' QUALIFICATIONS (CC. 9)

According to the World Bank (in UNESCO, 2006), the challenge is generally "not recruitment of new teachers but improving the quality of the teaching force in terms of qualifications, experience and competence" (UNESCO, 2006, p. 24). The parameters chosen in this comparison category aim to contrast the general features of the qualification demanded by each of the countries chosen for this research. A summary of the qualifications is displayed in Tables 7.11 and 7.12. Another objective is to better understand the specific characteristics of qualifications in each country, since "Raising the standard of qualification for teachers would do many good things" (Newby, 2007, p. 121), mainly related to teachers' status and the professionalization of the career.

7.4.1. LEVEL OF QUALIFICATION AND GENERAL CHARACTERISTICS (P. 28)

This parameter refers to general characteristics of teachers' qualification when concluding a specific programme on teacher initial education. It does not cover teachers' licences granted after obtaining a teacher education diploma, but the initial qualification. The general characteristics are shown in Table 7.11.

Table 7.11: China-Spain secondary teachers' initial education: type and level of teachers' qualifications

Indicators	China	Spain
Level of qualification to teach in junior/senior secondary education	ISCED 5 ISCED 6 ISCED 7	ISCED 7
Responsible body for issuing the qualification	Universities on behalf of the Ministry of Education	Universities, signed by the Rector of the University on behalf of the King
Territorial validity	Qualification is valid nationwide but teachers must be registered in one region. They cannot teach in another region. They can register where they live or study	Nationwide

Source: Researcher's original compilation from MOE (1995bc, 2013e) and MECS (2007c)

Qualification in China corresponds to three different levels, ISCED level 5 (mainly for junior secondary education, but increasingly changing towards ISCED 6), 6 and 7 (mainly for senior secondary education), while in Spain it can only be ISCED 7. These levels of qualification are, according to several authors and international agencies, the proper levels at which teacher education should be developed, since they all belong to higher institutions' qualifications. However, the fact that Spain has only an ISCED 7 degree confirms that secondary teachers in Spain do not have their own degree, since this is only understandable as a complement to scientific knowledge, without distinguishing between junior and senior secondary school (Vega Gil, 2005).

"The status of a profession and its recognition by society naturally depend on the level of qualification required by those who practice it. Teachers are no exception" (Eurydice, 2002, p. 103). The convergence in this matter is clear: despite the fast-growing number of students acceding to higher levels of education, both countries have raced (and reached the

proper level) to educate their teachers at the level established by law. Nowadays all Spanish teachers working in junior and senior secondary education have an ISCED 7 or a previous qualification at a similar level. In China, the percentage of teachers with the required qualification is close to 100% (99.8% in junior and 99.3% in senior secondary schools, see Chapter 5).

The qualification level helps to raise teachers' social prestige, academic recognition and teaching as a high-status profession (Newby, 2007; Manso and Valle, 2013). It is undeniable that the "close identification with Higher Education will reinforce the notion that teaching is a knowledge-based, research-driven profession. Universities exist to work with knowledge: *discovering* new knowledge through their research; *validating* knowledge through their academic disciplines; and *disseminating* knowledge through teaching and publication, at all levels from first-year undergraduate to post-doctoral and beyond. To dislocate the teaching profession from such a context […] is to cut away a part of its brain" (Newby, 2007, p. 122).

Another divergence, strongly linked to the territorial size and administrative distribution, is the validity of the qualification. In Spain, qualifications are valid in the whole territory, and teachers can work in schools all over Spain (mainly private and co-funded/private institutions, since public schools' selection exams are taken in each autonomous community.). This matter is related to the notion of the Hukou, mentioned in Section 6.2.2. In China, qualification may be valid in the whole territory, but licences only permit teachers to work where they are registered. Registration in each region is only allowed if a teacher has a living or working permit, usually obtained when born or studying in the region.

7.4.2. RELEVANT ASSESSMENTS FOR OBTAINING A TEACHING QUALIFICATION (P. 29)

To obtain a university qualification it is necessary to take certain assessments or go through an evaluation process. In general terms, both countries principally base their systems on written exams, during general, basic and post-compulsory education. But when talking about university degrees, exams are only taken in each of the subjects and there is not, as at the end of secondary education, a general assessment including all the areas. The evaluation process to gain a final qualification in teacher education shows more convergences than divergences, as presented in Table 7.12.

Table 7.12: China-Spain secondary teachers' initial education: teachers' qualification assessments

Indicators	China	Spain
Final university exam to obtain a qualification	No	No
National/regional exam to obtain the final teaching qualification after the specific programme of teacher education	No	No
Assessment to directly grant a teaching qualification	Yes	No

Source: Researcher's original compilation from MOE (1995bc, 2013e) and MECS (2007c)

There is not, in Chinese or Spanish universities, a final exam to obtain a teaching qualification. The requisite is to pass all the classes, including the practicum. Examinations in both China and Spain belong to the selection process to enter the profession if students want to work in public schools (recruitment), but for private schools there is no national or regional assessment.

Another general notion is essential for understanding the previously explained working conditions, working context and importance of teaching qualifications in China: the teacher ranking system. China has a system of levels for teachers which does not exist in Spain. According to the Chinese legislation, *Regulation of Secondary Teachers' Promotion* (1986, in Yang, X.R., 2010) there are four levels of teachers: intermediate levels 3, 2, 1 and senior level.

For a teacher to be in one or other level, several factors are taken into consideration, such as specific qualifications, work experience, pass mark in an assessment on knowledge of education, pedagogy and psychology, or participating in research activities, among others. An honorary title, 'special rank' is granted to outstanding and highly devoted teachers. If not officially established, this level has existed since 1973 (Yang X.R., 2010). Initial education is a main element to enter each of the levels. Undergraduate students enter the lowest step while Master's and PhD students have the possibility to accede to a higher level; hence the relevance of the initial qualification. On the other hand, these rankings are not common in Europe, and it is a topic which is not currently being taken into consideration in Spain.

7.5. SELECTION OF TEACHERS-TO-BE FOR INITIAL EDUCATION PROGRAMMES (CC. 10)

Teachers participate in two different selection processes, to enter an initial education programme and to enter the profession. The second process, called recruitment in this thesis, is not analysed in this section since it is considered part of the next step and not of initial teacher education. Nonetheless, this study maintains an awareness that the selection for initial teacher education programmes contributes to teachers' future status and aims to build a strong basis for teachers' continuous education and that teacher's initial education should offer the basis for their recruitment. It is important to "reinforce the idea that initial training is only a staging-post on the way towards a career-long journey of professional learning, where at present it is too much conceived as an end in itself" (Newby, 2007, p. 122).

7.5.1. PREVIOUS EXAMINATION (P. 30)

This parameter contains the indicators referring to the examination on which the selection process is based. As explained before, an important dissimilarity must be taken into account: the existence of concurrent and consecutive paths, which affects the timing and contents of the selection. Convergences and divergences are shown in Table 7.13.

Table 7.13: China-Spain secondary teachers' initial education: selection for teachers' initial education programmes and previous examination

Indicators	China	Spain
General/national examination to determine secondary teachers' initial education entrance	Yes, in both undergraduate and Master's (regular undergraduate enrolment) No, universities design their own selection process (independent enrolment)	No national Depends on the university
Subjects assessed in the exam	Determined by the Gaokao (depends on the concentration)	Core subject Foreign Language (Level B1)

Source: Researcher's original compilation from MOE (2003b, 2015a), MECS (2007c) and universities' selection policies explained in Section 5.1

The first indicator tackles the final examination of the previous level (undergraduate programmes) or the entrance examination (Master's), depending on the level of the initial teacher education plan. At the end of senior secondary education, all students should pass

an examination (see Sections 4.1.5 and 4.2.5). If the initial teachers' education programmes are designed as undergraduate degrees, as generally happens in China, the main evaluation corresponds to the national entrance assessment, and the subjects students have chosen in the aforementioned exam. This assessment is also taken by Spanish students, but not in the anticipation of entering a secondary teaching undergraduate degree, which does not exist, but of choosing an undergraduate degree in the sciences or humanities.

Even when focusing on the Chinese consecutive path, another exam is taken to enter any Master's degree. In Spain there is not an evaluation to enter all Master's programmes, and the process depends on the university. Sometimes there are specific assessments for each Master's, which in this case is, for students without the adequate previous qualification, an exam in the core subject and another test in a foreign language (level B1). As Estebaranz (2012) highlights, the Order ECI/3858/2007 established the requisites to enter the Master's but do not mention any process of selection.

China is forced to be restrictive in their selection, because of the number of applicants. Still, in Spain, it is not only a matter of becoming more restrictive in access to teacher education (Manso and Valle, 2013), which will probably lead to a generalized discouragement from entering a profession that is not socially highly respected. As Professor Tiana suggests (Tiana, 2011a, 2013) one key elements would be to limit the number of students according to the employment demand. However, as he states, this would not be easy in the Spanish university where it is expected to have a university offer similar to the number of students' demands and where universities receive economic subventions as a function of the number of students.

In China, this is not currently a major problem, since it is well-known that each year around 25% of students cannot obtain a university place. For instance, Xinhua[79] reported in 2012 that nine million students were competing for fewer than 7 million university spots (Xinhua, n.d., cited in Wong E., 2012). Having fewer university places than students is such a common situation in China, (because of the large number of students) that examination

[79] The Xinhua News Agency is the official press agency of China. Xinhua is under the supervision of the Chinese central government and is the only information channel responsible for providing information about the Chinese Communist Party and the central government. The article to which this information refers was found in a *China Daily* article. *China Daily* is the only national English-language newspaper in China.

standards are extremely high. Competitiveness is not only encouraged for entering the teaching profession, but for entering any profession.

Still, in both countries shortcuts can be found, particularly for families with high incomes. In Spain, private universities often accept low marks; in China, wealthy families send their children abroad (Wong E., 2012). Minimum grades are tackled in the next parameter.

7.5.2. ACADEMIC AND PERSONAL STANDARDS (P. 31)

The profile of the candidates is one of the main aspects ensuring the success of an academic career, the quality of an undergraduate degree or any other plan. Choosing students who can fit in their future profession and setting certain criteria somewhat determines the value of the profession and the achievement of the students.

Problems derived from poor selection, added to other complications during the first years of induction and difficulties belonging to the particular profession, often lead to a mismatch of expectations, unmotivated professionals and high levels of burnout. Table 7.14 presents how each country considers student selection based on academic and personal standards to avoid this discrepancy between what should be an extremely vocational choice and a choice made out of necessity or commodity.

Table 7.14: China-Spain secondary teachers' initial education: selection for teachers' initial education programmes: academic and personal standards

Indicators	China	Spain
Characteristics which prevent entrance to university	Law violation Not conforming to health requirements	--
Average score to enter teaching degree	Depends on university: (2014) Liberal arts in Beijing Normal University 663 out of 750 (=88.4) Sciences 644 (=85.8) These scores are not only for teaching degrees. Normal universities have both programmes integrated	Depends on the university and the speciality (2015): Catalonia: English concentration: from 5 to 7.3 Geography and history: from 5 to 7.5 Physical education: from 5 to 6.5

	Ethnic minorities and students from other regions have lower requisites and certain places reserved	UNED: English: from 5 to 9.1 Geography and history: from 5 to 8.33

Source: Researcher's original compilation from MOE (2003b, 2015a), MECS (2007c) and universities' selection policies explained in Sections 5.1 and 5.2

One clear divergence between China and Spain are some of the requisites for entering any university in China. Certain personal characteristics or records directly ban entrance to university in China, which would be inconceivable in Spain, for instance, violations of the law or certain medical problems. At first glance, these policies may provoke several criticism, but the restrictions must be understood inside the Chinese strict selection process and mentality.

There are two pillars to this control: the first is the limited number of university places. As explained before 25% of the students do not have the possibility to keep studying in higher education institutions. Second, the Chinese system is based on a meritocracy where competitiveness is highly valued. The abovementioned interdependence promotes a system which (looking to improve the country's general state) chooses the best candidates in all areas, including moral and physical characteristics. While unthinkable in a western country, many Chinese will have noted that it may not be rational in terms of current international values, but it is reasonable in the Chinese social and economic situation.

Owing to differences in timing (after senior secondary school or after obtaining a Bachelor's degree), added to the competitiveness level and the contents of the selection process, there is also a significant gap between the minimum required marks. In both countries, selection marks depend on the university's offer and the demand for each degree. On one hand, in China, all degrees, including those concurrent with a teaching concentration, have high selection marks. These requisites are lowered for ethnic minority students or those from other regions. On the other hand, Spanish universities vary highly, and some universities even take students with the minimum passing grade (5 out of 10).

Low entrance standards for teaching degrees are not a new dilemma in the Spanish university landscape. Traditionally, the minimum mark to enter early childhood and primary teachers' education have been rather low, and sometimes even lower for undergraduate students to enter a secondary teaching Master's (Valle, 2012).

Tiana (2011a), former secretary of the Ministry of Education of Spain, which participated in designing the current Master's, and who has worked for several international organizations placed the emphasis on another component highlighted in a McKinsey report: teachers' frustration arising from this kind of no-selection process at the beginning of the profession. As in many other countries, the lack of a rigorous selection process before entering initial teacher education and accepting many more students than the number of working positions can lead to a situation where there are many teachers but not the best or not working.

7.5.3. ACADEMIC SELECTION (P. 32)

Once a candidate meets the general requisites discussed in the preceding parameter, comprehensive academic standards are taken, or can be taken, into account by each university. International proposals encourage countries to broaden their academic selection and to pay attention to a wider range of student characteristics. Though each university has, in both countries, freedom to design their own selection process, general and common guidelines of universities in each country are shown in Table 7.15.

Table 7.15: China-Spain secondary teachers' initial education: selection for teachers' initial education programmes: academic selection

Indicators	China	Spain
Component with highest weight in the final selection	Secondary/undergraduate grades.	Undergraduate grades
Exam grade/other degree marks the only component to enter a teaching degree	Depends on the university. Can occur.	Depends on the university. Can occur.
Possibility and freedom for universities to include another assessment for teaching degree candidates and kind of the assessment	Yes. Other assessments: interviews, papers, other evaluations.	Yes. Other assessments: interviews, papers, other evaluations.

Complementary components taken into account in the selection process	Depends on the university. Other components: awards, recommendation letter.	Depends on the university. Other components: CV, work experience, motivation letter, competencies in other languages, other diplomas (Master's or PhD).

Source: Researcher's original compilation from MOE (2003b, 2015a), MECS (2007c) and universities' selection policies explained in Sections 5.1 and 5.2

As promoted by the OECD (2005a) as a positive trend, selection through multiple components is becoming more popular, and selection criteria in China and Spain are gradually including interviews, aptitude tests or demonstrations of skills. Still, these kinds of processes are a minority, and are usually used in recruitment for teaching posts and not for selecting students for initial education programmes.

However, in both countries, the main component for selecting teachers-to-be is the grade at the previous level. In China, extra examinations are not common, since students arrive at their undergraduate degree after passing one or two exams. In other cases, it depends on the type of the enrolment (regular undergraduate or independent enrolment, see Sections 4.1.5.3 and 5.1.8), the path (concurrent or consecutive) and the university. An extra examination is not frequent in Spain, either, but, progressively, some universities are starting to take into account other components such as work experience, motivation letters or competencies in languages. In China, these components are mostly focused on letters of recommendation and awards.

In terms of entrance requirements for initial teacher education programmes, both countries share the European trends. It appears that admissions are administered by general entrance requirements for tertiary education and not by specific selection criteria for teacher education, aptitude tests or interviews. Complementary assessments of candidate motivations are scarce (European Commission/EACEA/Eurydice, 2013).

It seems that this situation has not changed, at least in the last decade, in China, Spain, or most European countries, where "The academic proficiency of candidates remains the commonest selection criterion, and is assessed either with reference to marks obtained in previously awarded qualifications, or by means of an entrance examination. Criteria associated with interpersonal aspects or motivation for working with adolescents are less frequently considered" (Eurydice, 2002, p. 105).

7.5.4. ECONOMIC AND SOCIAL ADVANTAGES (P. 33)

Economic, time or security rewards when working as a teacher are not the only or most important incentives for choosing a teacher education degree, since they belong to the last step of the professional career. Other components, and previous opportunities and potentials, affect the candidate's choices. For instance, the possibility of entering a teaching degree in a certain city, paying for university fees or paying for accommodation if moving to another region are very important characteristics to take into account for some families and candidates. These options are also evaluated assuming that the economic and social reward may not be as high as in other professions for teachers, but the cost and investment in terms of money, time and effort could be similar. The way each government deals with this combination of candidates' possibilities and national policies is displayed in Table 7.16.

Table 7.16: China-Spain secondary teachers' initial education. selection for teachers' initial education programmes: economic and social advantages

Indicators	China	Spain
Economic advantages of entering a teaching degree	Some universities have a free-fee policy.	No.
Comprehensive advantages of entering a teaching degree	Yes. Students can register and work as teachers in the region in which they studied. Some provinces offer other benefits, such as priority when renting a house.	No.

Source: Researcher's original compilation from Ministry of Education of the People's Republic of China, Ministry of Finance, Ministry of Human Resources and Central Office (2007), national policies explained in Section 5.1 and MECS (2007c)

Attracting the best candidates, another goal repeated by various authors and international organizations (OECD, 2005a, 2009a; Barber, and Morushed, 2007; Auguste, Kihn, and Miller, 2010; Manso and Ramírez, 2011; Tiana, 2013), can be achieved through numerous initiatives. This study has already tackled identity, social prestige and teachers' working conditions, among others. However, these components may not be sufficient in several emerging countries, such as China, where resources and working possibilities are uneven.

The Chinese Government is going further and smarter to attract the best candidates to study education. China is improving their studying possibilities and future living conditions.

In a country where mobility depends on a licence to work and live in other provinces (as a way to control the massive rural-urban exodus), the possibility to stay in the main cities, such as Shanghai and Beijing, is an offer that many Chinese consider a great opportunity.

Besides the possibility of moving around the country, even if they want or have to come back (some scholarships have as a requisite that the student will return to their province after they graduate), students have the possibility to enter a free-fee degree. The offer is not only a scholarship (that can be granted for all degrees), but a way to select the best candidates, educate them and send them back to their provinces to raise the education level of rural areas. This policy clearly shows a major reliance on teachers as improving agents of the country.

Precisely, some of the criticisms of the Spanish system focus on the lack of this kind of general and broad policy to attract the best candidates, to offer an attractive career or improve their status (Estebaranz, 2012; Tiana, 2013). While policies like freedom of movement cannot be an incentive in Spain, the Chinese policies still represent a constructive example of the motivations offered in China, which are exclusively focused on teacher education as a continuous process, taking into account students' and future workers' lives. Certainly, the establishment of comprehensive policies would have a direct positive effect on teachers' lives, from selection to retirement.

7.6. SECONDARY TEACHERS' INITIAL EDUCATION SYSTEM UNDER AN INTERNATIONAL PERSPECTIVE OF QUALITY (CC. 11)

This last section aims to contrast international education guidelines with Chinese and Spanish plans. It attempts to detect international convergences and divergences within the concrete national contexts, and to identify which country is closer to the international notion and guidelines of quality. As shown in the methodology chapter, the indicators have been categorized following the general structure of the research. The first parameter corresponds to institutions and paths.

7.6.1. INSTITUTIONS AND PATHS (P. 34)

The national plans were discussed in Sections 5.1.4 and 5.2.4 for China and Spain, respectively, and 5.3 for international and supranational guidelines. International strategies aim to be wide enough to give all countries the possibility to meet their standards, but concrete enough to help countries improve their education systems. The proposals regarding

institutions and paths principally encourage countries to open as many routes as possible to enter the teaching profession while maintaining quality standards.

It is understandable than recommendations for countries where economic instability, war or school attendance are daily issues have to promote extensive, profitable, cost-effective and numerous ways to prepare teachers. In this international paradigm, in which China and Spain are well placed, most of the recommendations are somewhat met in both of the national realities. Details are shown in Table 7.17.

Table 7.17: Supranational guidelines for quality and initial teacher education: institutions and pathways in China and Spain

Indicators	China	Spain
Source of programmes' funds (sustainable channels)	Most schools are state-funded	State and privately funded
Flexibility of the structures	High flexibility	Low flexibility
Part-time study or distance learning	Yes, the China Television Teachers College (CTVTC) and Web-based universities	Yes, several Web-based universities, except for the practicum
Consecutive or post-graduate programmes	Yes, in some universities	Only path
Common components for different types of school and levels	Yes, between junior and senior secondary education. Separate routes for early childhood, primary and special education	Yes, between junior and senior secondary education. Separate routes for early childhood, primary and special education
Partnerships between teacher education institutions and schools	Collaboration is not nationally harmonized. Depends on the region, the universities and the schools	Collaboration is not nationally harmonized. Depends on the autonomous community, the universities and the schools
Possibility to move to other courses	Yes, in undergraduate programmes with double degrees	No, because of the 1-year character of the Master's

Source: Researcher's original compilation from national data cited in Sections 5.1 and 5.2, and international documents (Schleicher, 2011; OECD, 2011; UNESCO, 2015; UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR, 2015)

These indicators mainly present convergences between the international proposals and national policies. Convergences are found in the funding of the institutions, which is mainly public or from wealthy private institutions (hence generally from stable sources); in the existence of consecutive paths (the only way in Spain, and a possible pathway in some universities in China); and the common components among programmes for teachers for different levels, facilitating the movement of teachers among educative stages (sharing components for junior and senior secondary but not with primary or early childhood education).

China meets all the criteria except a clear and harmonized relationship between universities and schools which lacks, as does Spain, a national framework to regulate and promote this part of the programmes. Spanish divergences from both China and the supranational guidelines, are the flexibility of programmes and the possibility to move to another degree if the student's interest in teaching changes. Flexibility in China is assured by the existence of several programmes and the alternative route of an examination, but Spain shows in this matter a rigid, as well as nationally harmonized, policy.

The last indicator, the possibility to move to other degrees, is hardly possible to translate to the Spanish context, since the only programme is designed as a Master's degree with the main and exclusive goal is to prepare secondary teachers. In one year there would not be time or use to change to other programmes. This situation is also replicated in the Chinese programmes designed as a Master's.

7.6.2. CURRICULUM DESIGN (P. 35)

This parameter is explained in Sections 5.1.5 and 5.2.5, including the practicum. However, since international and supranational organizations offer several recommendations for this period, this section separates it into two parameters: one for the general curriculum (P.35) and one for the practicum (P.36).

As with the previous parameter, when addressing general curriculum design for secondary teachers' initial education, most national indicators agree with the international guidelines. Still, there are some divergences, as shown in Table 7.18.

Table 7.18: Supranational guidelines for quality and initial teacher education: general curriculum design in China and Spain

Indicators	China	Spain
Distribution between theory and practice	Modern trends in Chinese education are currently moving towards this direction. Still, most universities' programmes mainly based on theory and subject knowledge.	The Master's was an important step towards this direction. Still, the time for practice is short and can only be distributed during one year.
Specific subjects or guidelines focusing on challenging classroom conditions (multilingual or limited resources)	Not specified. Emphasis on practice where student teachers have to design and implement programmes depending on the characteristics of the students.	Not specified. Teachers' competencies stress the relevance of personalized methodologies according to students' diversity.
Emphasis on teachers' capacity to diagnose student problems and design solutions	Yes, focus on teachers' competencies to evaluate and assess students.	Yes, teachers' competencies in student assessment and personalized methodologies according to student diversity.
Specific subjects or guidelines focusing on equality (inclusive education, gender stereotypes, non-discrimination, human rights and intercultural education)	No specific subjects, but transversal content highlighting "respect for individual differences". No specific mention of inclusive education, intercultural education, gender equality or human rights.	No specific subjects, but transversal content (human rights, gender equality, non-discrimination, etc.)
Prepare teachers to manage ICT and social networks	Yes (curricular basis and teacher education curriculum).	Yes (stress on competencies in the Master's).
Strong content knowledge with skills for reflective practice and research	Yes	Yes
Pedagogy courses have a strong emphasis on using research based on state-of-the-art practice	Highly stresses research inside and outside the classrooms, and teachers' participation in and access to scientific research.	Programmes tresses the need to develop competencies to participate in research and innovation in teaching and learning.

Focus on effective teaching methods for learning	Yes	Yes

Source: Researcher's original compilation from national data cited in Sections 5.1 and 5.2, and international documents (Schleicher, 2011; OECD, 2011; UNESCO, 2015; UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR, 2015)

Analysing specific Chinese and Spanish programmes for secondary teachers, all international proposals tackling general organization and curriculum are accomplished by both countries except two in each country. First, in both countries, considering normal institutions and modern trends in China, the distribution between theory and practice in teaching degrees represents around 20% of the total plan to earn a licence, however Chinese non-normal universities and traditional programmes maintain a low percentage of pedagogical classes. Simultaneously, the Spanish Master's is an important improvement from the previous system, but still offers a short period to distribute the subjects, both practice and pedagogical knowledge.

Second, neither of the countries have specific subjects or classes for challenging classroom conditions, focusing on multilingual contexts or schools with limited resources. Both countries tackle this matter from a transversal perspective, placing the emphasis on student diversity rather than school conditions or resources. Regarding economic, personal and material resources, it is possible that both countries consider each school to have the proper amount of resources; hence teachers would not be asked to manage low resources. However, the inclusion of the current complex societies (students with different backgrounds, special needs, different religions and languages), if well done, is resource-demanding. Often teachers, alone, confront highly demanding situations without specific and previous preparation, which could be included in teachers' initial education plans.

There is a third divergence in China regarding equality philosophies. While Spain treats this as transversal knowledge in competencies, mentioning most of the supranational guidelines, the Chinese proposal is rather vague. The Chinese plan includes respect for individual differences but does not specifically promote the value or relevance of designing curricula and classes along equity values, or mention specific key groups of educative values such as gender equality, respect and inclusion of students with disabilities and human rights.

While these indicators differ, the emphasis on research, the use of technology, reflective practice, effective teaching methods and subject knowledge are highlighted in both national programmes, as specific contents or as transversal knowledge and professional competencies. On the other hand, the main divergences in teachers' initial programmes are mainly found in the component of the practicum, reflected in the next parameter.

7.6.3. PRACTICUM (P. 36)

As sustained during the entire thesis, the relevance of the practicum extends across all international and national scenarios. Not only it is fundamental to enter a real classroom and confront real situations, but it is also essential to understand and seize the multiple possibilities offered by this period. International organizations also encourage practicums to achieve a double objective. On one hand, this period allows students to smoothly enter the working world and be well-prepared when taking that step on their own. On the other hand, it offers an economical and reasonable possibility, for both governments and students, to earn a teaching qualification in countries where resources are scarce, but where teachers are in demand and communities are tied. The specifics of the guidelines for practicums are as follows:

Table 7.19: Supranational guidelines for quality and initial teacher education: practicum design in China and Spain

Indicators	China	Spain
Programmes include practical classroom experience	Yes	Yes
Teachers get into classrooms early in their studies and spend enough time there	Usually in the two last years of the 4-year degree. Normal universities with undergraduate programmes often include observation practices between the second and third years. Active practicum takes place during the fourth year, first semester. For 2-year Master's, practicums are divided between the last semester of the first year and the second year.	Only one year to place the practicum. Universities often design two practicums, observation in the first semester, and active teaching in the second semester. Still, some universities only have one active practicum during the second semester.

Student teachers get support in the process	Student teachers are tutored by two teachers, one from the university and one from the school.	Student teachers are tutored by two teachers, one from the university and one from the school.
More than a year teaching in a designated school, associated with the university, before earning a teaching licence	No	No
Mentor teachers receive appropriate training and support	There is no specific and national programme for mentors.	There is no specific and national programme for mentors.

Source: Researcher's original compilation from national data cited in Sections 5.1 and 5.2, and international documents (Schleicher, 2011; OECD, 2011; UNESCO, 2015; UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR, 2015)

Although both nations include compulsory practical experience, often more than one and of different types, supervised by tutors from both the university and the school, this seems to be the less harmonized element of the curriculum, from both a national and an international perspective. However, this is justified by several reasons.

On one side, international guidelines could sometime be understood as imprecise, trying not to restrict national decisions and to cover multiple educative systems and national needs. As a consequence, it is difficult to measure what "get into classrooms early" and "spend enough time there" means. In any case, Chinese students get into classrooms earlier than Spanish students and spend more time there. Both affirmations are also sustained by the fact that Chinese universities have, in undergraduate programmes, four years to organize the practices, while Spanish universities must tackle all contents and the practicum during one year.

On the other side, some supranational proposals are sometimes achieved in different stages in national plans. Chinese and Spanish students both earn a teaching licence at the end of the degree which allows them to work in the profession. It is not compulsory to teach in a school associated with the university for more than a year to get the full licence. However, this element could be part of the process when assessing teachers for public institutions, which then belongs to teachers' recruitment and not to teachers' initial education.

Another component in which national policies are still to be developed if aiming to undertake international advices is the mentors and tutors' conditions. Both countries lack national programmes and legislation for mentors covering not only economic or time rewards, but update activities, seminars or forums to prepare and help mentors with this important responsibility.

7.6.4. PROFESSIONAL COMPETENCIES (P. 37)

Besides the strong divergences on the practicum, compared with international schemes, the national policies strongly agree in terms of competencies. National competencies were explained in Sections 5.1.6 and 5.2.6, and later compared in Section 7.3. As with the national references, the term 'competencies' is not always used in all documents. Some international and national documents may refer to competencies, as in Europe, and others, as in China, to a combination of skills, knowledge and attitudes understood as transversal and necessary for all teachers under other notions such as professional standards. Table 7.20 displays competencies, chiefly discussing teachers' profile, attitude and skills, since knowledge was included in curriculum design.

Table 7.20: Supranational guidelines for quality and professional competencies in China and Spain

Indicators	China	Spain
Clear and concise profiles	Yes, an additional document to complement teachers' initial programme was released to detail teachers' competencies and profile.	Yes, the current teachers' initial education programme and profile is designed in terms of competencies.
Programmes develop skills for reflective practice and on-the-job research	Yes, determined in both the initial programme and the complementary document.	Yes, highlighted in the national programme for teachers' initial education.
Programmes provide research skills	Yes, determined in both the initial programme and the complementary document.	Yes, highlighted in the national programme for teachers' initial education.

Teacher profile encompasses subject matter knowledge, pedagogical skills, the capacity to work with a wide range of students and colleagues, contribution to the school and the wider profession and capacity to continue developing	Yes, determined in both the initial programme and the complementary document.	Yes, highlighted in the national programme for teachers' initial education.

Source: Researcher's original compilation from national data cited in Sections 5.1 and 5.2, and international documents (Schleicher, 2011; OECD, 2011; UNESCO, 2015; UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR, 2015)

The national plans in China and Spain cover all the competencies required by the supranational documents. Both have a clear profile for secondary teachers, including competencies, knowledge, skills and attitudes. Teachers and society know what is expected from teachers and the professional tasks are quite clear. Spain is also influenced by the European guidelines, which, in turn, are in line with other supranational frameworks.

Research competency and reflective practice take a primary role in teacher education and teaching practice. Teachers are progressively being seeing as generators of practical and theoretical knowledge, a natural path to increase the professionalization of teaching. This perspective has led to a situation where the national and international agendas encourage teachers to participate in research and to carry out auto-assessment.

The last convergence between Chinese, Spanish and international policies refers to the social and professional role of teachers. Current tendencies place teachers at multiple levels of the social sphere, hence the need to possess multiple characteristics, knowledge and competencies. Their profile includes subject knowledge and pedagogical skills, so as to cover the minimum and core role of teaching. In addition, knowledge has to go deeper and include personal and professional traits to work with different students and colleagues (flexibility, respect, cooperation skills). They also encourage teachers to become and feel part of the school and the group of teachers, which in turn, affects professionalization and status.

7.6.5. QUALIFICATIONS (P. 38)

While professional competencies show the highest rate of agreement between national and international strategies, this parameter, addressing teachers' qualifications, shows little concordance. The qualification characteristics of each country were presented in Section 5.1.7 for China and 5.2.7 for Spain. The comparison with international guidelines is shown in Table 7.21.

Table 7.21: Supranational guidelines for quality and initial teacher education qualifications in China and Spain

Indicators	China	Spain
There is a national qualifications framework for teachers at each level	Yes	Yes
Programme accreditation by an independent agency	National Centre for School Curriculum and Textbook Development (NCCT) approved by the HEEC (Ministry of Education) evaluates all programmes.	National Agency for Quality Assessment and Accreditation of Spain (ANECA).
Qualification includes subject matter knowledge, pedagogical skills, communication skills, experience and personal qualities	Qualifications do not explicitly mention communication skills, experience or personal qualities.	Qualifications do not explicitly mention communication skills, experience or personal qualities.
Appropriately qualified entrants are allowed to start working and earning a salary before acquiring teacher education qualifications	No, student teachers do not enter the profession earning a salary until they have obtained a full qualification.	No, student teachers do not enter the profession earning a salary until they have obtained a full qualification.
Mandatory probationary period of one to two years of teaching before full teaching qualification is awarded	No. Full qualification is awarded at the end of the academic programme.	No. Full qualification is awarded at the end of the academic programme.

Giving credit for significant qualification and experience	Yes. Qualification reached through specific assessment takes into account previous qualification and experiences.	Qualifications are linked to certain previous degrees and do not take into account significant experience (only to recognize certain classes from one programme to another).

Source: Researcher's original compilation from national data cited in Sections 5.1 and 5.2, and international documents (Schleicher, 2011; OECD, 2011; UNESCO, 2015; UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR, 2015)

The convergences between the supranational and national guidelines refer, mainly, to the general statement that both countries have a national qualifications framework for teachers at each level, including secondary education. They also accomplish the suggestion of having an independent agency for programme accreditation. However, the level of real independence could be further analysed in future research, mainly in China, where the NCCT is the only accreditation agency approved by, and affiliated to, the Ministry of Education.[80]

On the other side, ANECA, the main quality agency in Spain, takes the form of an independent foundation but has the Ministry of Education as a board member. The Ministry is allowed to propose the President of the Board of Directors but cannot officially interfere in evaluation or practical matters. ANECA is not the only official accreditation agency. Numerous autonomous communities have their own agencies, such as Catalonia, Andalusia, Galicia, Castile and Leon, Canary Islands, Country Basque and Madrid.

Divergences from the international guidelines, which are in turn convergences between the two countries, occur in three aspects. First, both nations include subject matter and pedagogical skills in the degree qualification, but neither highlights communication skills, experience or personal qualities in their qualifications. Though it is difficult to objectively evaluate these components, they are all tackled during teachers' initial education plans. Nonetheless, they are not explicit in the final qualifications.

[80] The list of affiliated entities, and the affiliation of the NCCT, can be consulted at: http://www.moe.gov.cn/moe_2792/moe_2795/moe_2799/201001/t20100117_48872.html [December 8, 2015]

In a similar matter of qualification, different between China and Spain, China takes into account significant experience and other qualifications for entering the teaching profession through specific assessments, a non-existent path in Spain. Spain takes into account other qualifications only when similar subjects can be recognized in the official degree.

Second, aiming to suitably qualify all teachers, students are not allowed to enter the teaching profession and receive a salary before they have the correspondent qualification which is the minimum requisite to be 'appropriately qualified'. Although this measure may be quite common in countries with a large lack of teachers, it is not common in developed or developing countries. Still, a middle way, such as the French system, in which students graduate from a subject knowledge degree and have a first year of pedagogical knowledge, take an examination and start working in schools for a year without a full qualification but earning a salary, could tackle different issues. This strategy could help to address the lack of practice and experience, and the future burnout of teachers who did not have qualified mentors during their education and get lost and frustrated in real situations.

Third, and related to this idea, neither of the countries have a probationary period of one to two years before full teaching qualification. As emphasized in the previous subsection, this process sometimes belongs to public servants' recruitment, with no national harmonization whatsoever.

7.6.6. SELECTION OF TEACHERS-TO-BE (P. 39)

The last parameter, selection of teachers-to-be, reflects some of the proposals made in other indicators, such as the necessary subject knowledge, and presents both convergences and divergences. Chinese students' selection was described in Section 5.1.8 and Spanish students' selection in 5.2.8. The juxtaposition of the national and international proposals is shown in Table 7.22.

This parameter is probably the widest in international and supranational proposals, which regard only general procedures. This general organization is due to the fact that selection process usually belongs to each institution, hence flexibility must be an intrinsic value. It is not possible for international organizations to reach such a low administrative level (going through international, national, regional and institutional levels), and proposals centre on the national realities later adapted in each area.

Table 7.22: Supranational guidelines for quality and initial teacher education selection process in China and Spain

Indicators	China	Spain
Small number of university-based teacher-education colleges with high entrance standards and relatively high status in the university	Both comprehensive and normal universities offer teacher education programmes. Entrance standards are high for every degree, since the total university demand is higher than the offer.	Education faculties in comprehensive universities are mainly responsible for teacher education. Entrance standards are not very high.
Enter teacher education programmes knowing enough about the subject (consecutive models)	Yes, this is the main requisite.	Yes, this is the main requisite.
Procedures to assess whether individuals wanting to become teachers have the necessary motivation, skills, knowledge, and personal qualities	No, most procedures do not include this kind of assessment.	No, most procedures do not include this kind of assessment.
Increase status of teachers and offer an attractive career path to attract better candidates	Yes, legislation promotes teachers' status. There is a professional development ranking linked to experience, which increases salary and status.	Yes, legislation promotes teachers' status. There is no professional development plan, except for salary rewards linked to experience.

Source: Researcher's original compilation from national data cited in Sections 5.1 and 5.2, and international documents (Schleicher, 2011; OECD, 2011; UNESCO, 2015; UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR, 2015)

In the first indicator, referring to institutions and entrance standards, China agrees with international standards better than Spain, which in this case does not totally meet the supranational suggestions. China has both comprehensive universities and normal universities, both with high status, and high entrance standards, not only for teaching degrees but for all kind of undergraduate degrees. This is also sustained by the fact that some undergraduate programmes offer a double degree; hence the entrance status is not only affected by teachers' status but by other fields.

On the other hand, Spain has mainly high-level comprehensive universities in which the faculties of education offer teacher education. This distribution is the most common in Spain, placing teacher education at the same level as any other degree, such as engineering, law or medicine, organized by each of their faculties. However, entrance standards for teaching degrees are rather low.

One of the convergences regards the increment of teachers' status, which is recognized and encouraged in both countries in national-level legislation. Though the career path differs between countries, as succinctly explained in Chapter 5, both nations modify teachers' conditions linked to experience. In Spain, career paths and experience have economic rewards; in China they attract economic and social rewards. Whether this professional development is attractive enough to high-level candidates does not belong to the topic of this dissertation, but could be tackled in future research.

Another convergence refers to the fact that both teachers' initial education degrees, when belonging to consecutive models, assure candidates' subject knowledge before they enter teacher education programmes. This is, in fact, the main requisite for entering teaching programmes, but in turn leads to one of the main divergences between both national and international proposals: the components of the selection.

None of the countries nationally includes, during the selection process, students' motivations or personal qualities. Some institutions are starting to use some of these criteria, but this is not widespread and usually has a low impact in the final decision. Knowledge and previous marks and academic outcomes are the main components of the evaluation.

7.6.7. TRIANGULATION OF CHINESE, SPANISH AND INTERNATIONAL GUIDELINES

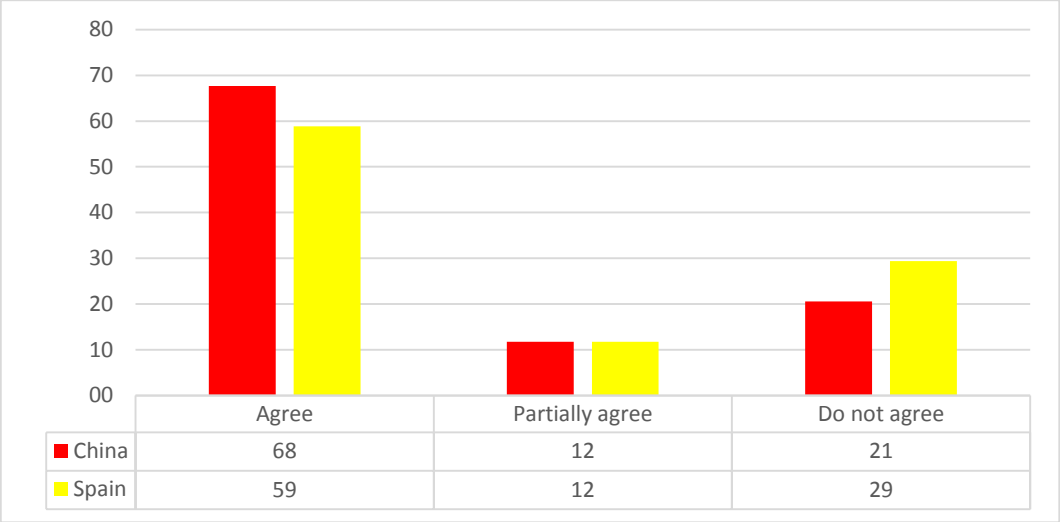
In a broad view, both countries accomplish most of the international and supranational standards. The data from each country is displayed in Table 7.23 and Chart 7.3, where 'agree' refers to national policies completely meeting supranational standards, 'partially agree' to national proposals meeting the requirements to a certain degree but not fully, and 'do not agree' to the national system being different from the supranational suggestions.

Table 7.23: Agreement between Chinese and Spanish national policies and supranational proposals (total and percentage)

	Agree		Partially agree		Do not agree	
	Indicators	%	Indicators	%	Indicators	%
China	23	67.6%	4	11.8%	7	20.6%
Spain	20	58.8%	4	11.8%	10	29.4%
TOTAL	34					

Source: Researcher's original work

Chart 7.3: Agreement between Chinese and Spanish national policies and supranational proposals (%)



Source: Researcher's original work

After analysing all of the indicators, it is possible to confirm that, in general, China is closer to the international guidelines than Spain. To a certain degree, this is due to the high flexibility and variability found in the Chinese structures, hence some universities can highly agree with the international standards while others can show greater divergence. For instance, the possibility to move to other courses, the possibility and flexibility to distribute theory and practices or the fact that teachers get into classrooms earlier belong to 4-year undergraduate programmes, one of the modalities in Chinese universities, but these criteria would not be reached in Master's programmes, also frequent in Chinese universities.

Generally speaking, the criteria show high convergences between countries, even when they disagree with the international proposals. This is the case with the specific guidelines for challenging classroom conditions, a national framework for mentors' support, probationary periods before earning a teaching licence, pre-qualified teachers working with

a salary and assessment of motivational and personal qualities before entering initial teacher education programmes. China and Spain have similar situations in these indicators but do not meet the supranational criteria.

The few exceptions in which one of the countries agrees or almost completely agrees with the international guidelines and the other disagrees or concurs at a lower level are flexibility, significant qualifications to be counted in qualifications and university selection standards (China agrees but Spain does not) and equality and promotion of values (Spain agrees but China does not).

7.7. SUMMARY OF THE CHAPTER

As with the previous chapter, this section presents quantitative and qualitative data from primary and international and supranational sources (complemented by secondary sources to contextualize the information), in this case focusing on secondary teachers' initial education. As indicated in the comparative methodology, data of both countries is shown in tables and charts, structured according to Comparison Categories 6 to 11. Comparison Categories 6 to 10 tackle secondary teachers' initial education paths, institutions, curriculum, qualification and selection, while the last category shows a triangulation of national policies and international standards of quality.

One of the main conclusions of this chapter is the increase in relevance of professional competencies, a relatively new notion being taken into consideration by both territories, which in turn suggests a future modification in the concept of teacher education itself. Though some differences remain, the data suggest that the majority of teachers are required to acquire similar skills, knowledge and abilities to deal with modern society and classes. Other tendencies are noticed, both convergences and divergences, in the level of the programmes, the distribution of the credits and hours, the design of the practicum, the selection process for the students and the characteristics of the qualifications.

Another component supports the idea of teacher education taking a positive turn towards comprehensive programmes which include subject knowledge, pedagogical knowledge and skills, and personal attitudes: the concordance between the national and supranational guidelines. This last part of the chapter presents the degree of national agreement with international trends and, even when both countries show a certain amount of divergence, it clearly shows more convergences.

CHAPTER 8

SUMMARY OF RESEARCH FINDINGS AND APPLICATION

This chapter is organized into four sections, (1) general conclusions of the study, (2) application of the findings and proposals to improvements and reflections for Spain, (3) strengths and weaknesses of the study and, (4) recommendations for further research which could complement and deepen the findings of this thesis.

The first part comprises an analysis of the current state of the two countries associated to the comparison categories, the research questions and the hypotheses. It also notes the conclusions when comparing the national and international standards. The second section is in turn divided into two subsections, one tackling general suggestions for the Spanish educative system and the other following the comparative categories and directly addressing secondary teachers' initial education. The third section sums up the strong points and limitations of this research and the strategies used to mitigate the limitations and promote the strengths. Finally, the fourth section suggests future lines of investigation for comparative education studies regarding teacher education to which this research could contribute.

8.1. CONCLUSIONS

The study aimed to detect divergences and convergences in the current national and international trends affecting teacher education. Teacher education is immersed in national and cultural contexts and is a product of a certain history. International history also has consequences for national realities, since, "The importance of international programs to educational reform is held in the ability to allow reformers to pick through effective or ineffective ideas from other cultures, adopting or abandoning as needed. This can come as a great advantage to reform, as it will allow Chinese [and western] educators to observe the pros and cons of other models, without directly experiencing the drawbacks of that model" (Powell, 2014, p. 17). These conclusions intend to offer a transversal view on the present situation comprising not only teacher education but countries' broad state, and to offer a practical use for the findings of the study.

In this matter, the purpose of this thesis was to understand and analyse how China and Spain prepare their secondary teachers in the first step of their professional career, and to detect positive and international trends which may help to design better secondary teachers' initial education programmes adapted to the current globalized circumstances and needs.

The conclusions are organized to confirm or deny the three research hypothesis. As explained in the methodology chapter, Chapter 2, the hypotheses are guided by objectives and research questions. This chapter compiles and organizes the information found in the entire thesis to answer the research questions of each of the hypothesis.

8.1.1. HYPOTHESIS 1

The eight questions to meet the first General Objective, "To understand and describe, under a contextualized framework, the main elements of secondary teachers' initial education systems in two countries: China and Spain. To detect and describe international standards of quality regarding teacher education", are as follows:

1. What is the national context (territorial, social and economic features) in which teacher education takes place from a national, continental and international perspective?

   When considering the findings of the research connected to this question, it is relevant to take into account Chapter 3, to understand the global progression of teacher education in the world; Chapter 4, referring to national cultural characteristics,

European-Asian cultural differences and countries' involvement in the international context, and Chapter 6, where the juxtaposition of national general data is presented.

From a national point of view, teacher education takes place in two countries with strong cultural (see Table 6.14 and Section 4.3), territorial and socio-political and economic divergences (see Table 6.2), but whose perspective, progression and participation in the world is strongly influenced by international agendas and globalization. According to the findings in Table 6.1, obvious divergences refer to location, territorial size, population and population living in rural areas, population living below the poverty line, unemployment rate, political organization and national philosophies. Convergences are found in the cultural and religious diversity inside each country, in national recent histories of lack of relationships in the international field and their late economic recovery, and current participation in international organizations (see Sections 4.1.1-4.1.3, and 4.2.1-4.2.3). In this scenario, teachers have to be prepared to deal with their national background but also with international confluences, demands and progress.

The national settings in China and Spain are predominantly influenced by their diversity in culture and their history of education (see Sections 4.1.4, 4.1.5, 4.2.4 and 4.2.5), where European and Asian cultures, tendencies and agreements somewhat guide national proposals. One of the main reasons for introducing this kind of information is that teachers have to be prepared to deal with their own society as active and constructive members. In these countries, the notion of teacher and student is slightly different. On one hand, Chinese teachers have to deal with students highly interested in education, in part, due to family and social pressure and the meaning of education in their life and their families' situation (see Sections 4.1.5.6 and 4.2.5.6). Society, families and students expect teachers to respect and promote communist values and understand and practice Confucian philosophy (see Sections 4.1.5.1 and 4.2.5.1, and Table 6.7). In this environment, students' efforts and respect towards teachers is intrinsic to any education plan, and examinations are the main objective and milestone in any education institution (see Table 6.3). Commonly, a large number of students in the same classroom (see Chart 6.2) as well as the competitiveness and pressure to obtain high academic results, drive teachers to keep using a frontal pedagogy for all students and subjects.

On the other hand, Spanish teachers must be prepared to deal with completely different sceneries. Students' motivation does not come from social pressure but from personal interest and family involvement. School settings agree, at least in general and official principles, with the government values of democracy, human and children's rights, equality, etc. (see Table 6.7). In this scenario, teachers are expected to have a fluent relationship with their students, to listen and to meet students' individual needs, and to adapt their practices to several levels. Teachers have to adjust their methodology to the school, the group and the students. The fact that teachers are not socially valued as highly as in China (see Table 6.12) and differences in students' interests and levels, often leads to situations where teachers must manage complex classrooms. Not only the lack of status but the high level of diversity, particularly in public schools, requires teachers to develop inclusive and flexible pedagogies where the effort does not come exclusively from the student. Hard work is expected to be shared among teachers, schools, support teachers, social services, families and the student.

Teachers' initial education has to meet these social requirements, hence the systems have to adapt their structures and contents to their own realities. However, from a continental and international point of view, the differences are not so obvious. Following the economic trend of globalization and national co-dependency, both continents, Asia and Europe, are undertaking similar paths on education. According to the information shown in Sections 4.1.2 and 4.2.2, though the European education path and relationships among the countries of the continent are more consolidated, (thanks to the European Union and, in this case, to European Area of Higher Education), China is also generating strong ties with other Asian countries (especially with Korea and Japan). In this sense, both countries can categorize their systems under international classifications (as ISCED) which perfectly fit the internal division of their systems, and both are immersed in a constant process of professionalization of the teaching career while involved in international organizations.

One of the convergences between China and Spain, regarding the continental perspective, is their high relevance within their own continent. Both are one of the largest and most populous countries of their continent and are involved in numerous economic, political and educational exchanges (see Sections 4.1.4 and 4.2.4). Spain takes part in trades and exchanges as a member of the European Union. This supranational organization includes rights and responsibilities regarding multiple areas, such as free

trade, justice, agriculture, etc. On its side, China, and Asian countries, do not belong to any organization in which countries are encouraged to give their national powers to supranational organizations, but work under treaties and agreements. Examples are the China-Japan-Korea free trade area or the participation of these three countries in ASEAN+3.

Both countries' participation is also noticeable at the international level, and territorial, social and economic differences are somewhat dispelled when increasing the level of analysis. Both countries belong to several international organizations, such as the United Nations and UNESCO (see Sections 4.1.2 and 4.2.2). The solid presence of China, after its opening up to the international field, and the participation of Spain, since its inclusion in the European Union, have triggered education changes in both nations. Several education policies from international and supranational organizations have somewhat transcended to the national contexts, and Chinese and Spanish participation in the international education field has increased.

2. What are the latest trends in education, impacting on teacher education, in each of these continents and in the two selected countries? How are these continents and countries participating in broader initiatives which have an influence on teacher education?

As seen in Sections 4.1.4 and 4.2.4, in general terms, the continents' education trends mainly show divergences between Asia and Europe. In Asia, being such a large continent and the most populous of the world, it is possible to find countries with uneven rhythms of development. Several Asian countries are currently dealing with high enrolment rates but scarce resources, with an increase in teacher-student ratios, wide economic gaps among societies or poor quality professionals, among others (see Section 4.1.4). However, when selecting East Asian countries, the area where China is placed, trends tend to be similar to those of Europe.

East Asian countries, mainly China, Japan and Korea, share with Europe a trend of promoting lifelong learning strategies, aiming to define and meet certain level of quality in education, establishing national standards, using ICT, changing the evaluation process, and promoting teacher quality. These trends are complemented in Europe by the purpose of the European Union to bring closer all citizens of the Member States by endorsing European languages and teachers and student mobility and qualifications (see Sections 4.1.4 and 4.2.4). In this matter, Asian countries are also sponsoring student exchanges

among Asian countries, still settled with less harmonization than in Europe. Each of these foundations are later reflected in teacher education policies in both countries, as a necessary step towards improving teacher education under international standards.

On one side, as explained in Section 4.2.4, Europe has created the European Higher Education Area, where all countries design their university degrees in ECTS and the university structure is divided into three levels: first cycle (180 to 240 ECTS), second cycle (90 to 120 ECTS) and third cycle (usually PhD, no credits necessary). Credits have similar workloads and academic years have similar numbers of credits. Besides this, quality standards and follow-up meetings are regularly planned. In this scenario, teachers' education takes place in similar systems and academic exchanges are frequent, hence the obvious sign of international trends.

On the other side, as described in Section 4.1.4, East Asian countries are supporting student exchanges and countries' cooperation in education matters, via specific programmes such as CAMPUS Asia, the Japan-China-ROK Trilateral Summit Trilateral Cooperation VISION 2020 or the ASEAN+3 Plan of Action on Education: 2010-2017. Similarities between European initiatives and Asian plans come when analysing the units of the education plans. Several Asian programmes take as references the European ECTS, and Asia now has several credit systems or transfer schemes, such as the ACTS, ACTFA or UCTS (this system is equivalent to the European ECTS where a year is worth 60 credits). Again, this is a sign of the globalization of education.

All European and Asian plans are targeting harmonization of their higher education systems, which has, in turn, an impact on teacher education. Not only can students experience teaching systems in other countries, but they have the possibility to obtain a foreign qualification. In this scenario, states' broader initiatives have to agree and share education lines with other countries and adapt their programmes and recognize other countries' plans under similar perceptions of quality. Again, these dynamics show the relevance of international, inter-national and supranational organizations and relationships and how agreements later transcend to national realities.

As stated in the previous question, a clear convergence is the opening of both China and Spain to economic, political and educational exchanges which are currently being promoted all over the world. As described, European and Asian exchanges within their

own continent are highly endorsed, but exchanges between Europe and Asia are still scarce.

Going to the national level, education trends regarding teacher education are addressed in Sections 5.1.1 and 5.2.1, under the title of historical perspective. Changes in teacher education have been related to new perspectives in education: in China often coming from foreign models (mainly Russian, Japanese and American) and in Spain as a result of internal political disagreements. In the last century, both nations have reformed their teachers' education system several times. However, a noticeable divergence in history has had a strong influence on current systems, so where the Chinese teacher education systems have traditionally been designed in a concurrent model, the most common Spanish path has always been consecutive models, hence, some of the current difficulties in modifying the contemporary model.

3. What are the continental agendas (Asian and European) to further improve teacher education?

According to the plan of the thesis, Sections 4.1.4 and 4.2.4 tackle the future guidelines on teacher education for each continent, Asia and Europe. As explained in the theoretical framework, countries are inevitably connected through globalization and, international and supranational proposals are likely to be echoed in national scenarios. In this case, the question refers to continental scenarios, since they are the closest realities to each country, and due to the fact that China has strong education ties with other Asian countries, mainly other East Asian nations (as explained in the section on harmonization in Asian higher education, 4.1.4), and Spain is strongly influenced by the European Union as a supranational organization (as explicated in the section on the EHEA, 4.2.4).

This question complements the first two research questions. Questions 1 and 2 cover how each of the nations are now and their education system, all centring on features under international, continental and national perspectives, and characteristics that affect teacher education and societies' predisposition towards teachers. These two questions were included to better understand the present, while Question 3 aims to comprehend the future direction of each country in accordance with continental tendencies.

The Asian and European guidelines agree on the necessity to reduce the tendency of teacher education institutions to demand low selection standards, which are in turn, decreasing teachers' status and attractiveness. Asia and Europe are trying to increase the

attractiveness of the career. However, in this matter, the realities are marked by two facts: (1) the large population and lack of university places to cover student demand in Asian countries versus the small population and wide academic offer in European countries (see Tables 6.1 and 7.13, and Section 4.1.5.6 and 4.2.5.6); and, (2) the dissimilar social status of teachers in the two societies (see Table 6.12).

In this scenario, countries are forced to find different solutions for promoting teaching's attractiveness. Economic security and extra pay and salary bonuses are offered in most societies, while social benefits are principally found in Asia. Another divergence is the meritocracy system instituted in Asian societies, where teachers are also evaluated in rankings, depending on their experience and their students' achievements. Nonetheless, trying to settle this kind of system in Europe may have the opposite consequences. Teachers' status is rather low, and candidates can feel discouraged from enter a suddenly competitive profession with little social or economic rewards (for national examples see Table 6.10 and Charts 6.7 and 6.8).

As explained in these sections (4.1.4 and 4.2.4), besides teachers' status and selection, both continents promote student inclusion, respect for differences and adaptation to students' capacities and needs. However, the terms for integration and inclusion may encompass differences when deeply analysed. The addition of new terms referring to children's rights and inclusive education is due to a progressive transformation of societies' mentality and understanding of educational difficulties and diversity, as well as migratory movements and the appearance of the concept of multiculturalism in each society as a result of globalization. In this regard, teacher education guidelines focus on teachers' competencies to adapt their classes, understand their students and manage multicultural and multicapacity groups.

This is only one of the purposes supporting the establishment and creation of a competency framework, in both Asian and European initiatives, which also refers to the use of ICT and lifelong learning strategies. Both continents' plans are also looking to find a better balance between education, research and innovation, and between pedagogical competences, subject matter knowledge and subject didactics. The weight of international organizations and the fact that all countries are somehow involved in the international field is patent in the numerous convergences between the Asian and European agendas. Nonetheless, certain differences persist.

On one hand, Asian guidelines are now focusing on reshaping teachers' role to prepare teachers under a less hierarchical structure and more comprehensive approaches. Main statements in Asian societies revolve around the differences between Asian and western countries when understanding teacher education, or the concept of teacher and education themselves. These notions are, in Asia, strongly influenced by Confucianism and have important dissimilarities when compared to western concepts (explained in Section 4.3.1).

Asian experts demand that the Anglo-Saxon model should not be taken as the only normal or effective paradigm. They also stress that evaluation standards have to deal with this different concept. Besides this, Asian institutions are looking for strategies to find fluent channels of coordination between universities and administrations, and to manage the contrast between academic freedom and government control of quality. Another goal of the Asian agenda is to develop a better plan to share competencies between different types of institutions responsible for teacher education, such as comprehensive universities and normal universities or universities of education.

On the other hand, European guidelines are focusing on identifying the skills teachers need to deal with their changing roles in the knowledge society. Core concerns in Europe belong to the need to increase the number of teachers in certain subjects, such as mathematics, science, technology and languages. Europe is aiming to open the profession to wider profiles, trying to attract experts from other fields, as well as to have enough candidates in all specialities and levels. The European agenda highly emphasizes mobility and partnership, hence promoting learning abroad experiences and democratic and reflective practices (see Section 4.2.4).

All these intentions have to be adapted to fit national structures. Bearing in mind the purposes of international, continental and national entities is essential to grasp the depth of the research topic. Still, a lower level, closer to the real teaching world, must be tackled: the specific academic structure in which teachers are expected to work.

4. What is, in terms of legislation, investment, future guidelines and structure, the general system of education in each country?

The information and sources to answer this research question are explained in Sections 4.1.5 and 4.2.5 and Chapter 6 on juxtaposition and comparison analysing general features. Legislation of education, in both countries, works towards values of respect and

equality and guarantees education despite personal situation and characteristics, etc. There are, however, two important differences, one related to the organization of the laws and the other to the underlying principles (see Tables 6.6 and 6.7).

On one hand, Chinese legislation is very specific and detailed, while the Spanish is more comprehensive. Proof of this difference lies in the fact that China has three national laws (besides the Constitution) regarding the components chosen in this thesis, named the Compulsory Education Law, Education Law, and Teachers Law. In this sense, Spain has only one (besides the Constitution) broad law, the Organic Law on Education, which includes articles concerning all these issues. Both countries have later developed their legislation through orders or notices.

On the other hand, the values underlying the education legislation are clearly diverse. China stresses communist and socialist values, under the guide of Marxist-Leninist philosophies and the values stressed by Mao Zedong. These values are reiterated in all legislation and official programmes. The legislation also reaffirms the significance of having high ideals of morality, civic virtues, love for the motherland, for the people, for labour, for science, socialism, patriotism, etc. In contrast, Spanish values belong to a democratic organization which emphasizes respect for fundamental rights and personal freedom, gender equality, no discrimination and justice (see Tables 6.6 and 6.7 and Sections 4.1.5 and 4.2.5).

Every educative system has its own characteristics reflecting societies, policies and tendencies in education. In general terms, and related to their cultural baggage, the Spanish and Chinese education systems show both convergences and divergences. As described (see Table 6.6), numerous differences are rooted in the national organization, regarding laws and priorities, such as the fact that the Chinese education system benefits from a certain stability thanks to general laws and a strong pool of public institutions, but the policies of which restrict regional and local intervention through a centralized organization. This national control is also reflected in the existence of a specific national department that examines and approves all school materials. On the other hand, the Spanish system is determined by political confrontation and instability according to political changes. This fact is somehow softened by a decentralized system, which should theoretically give more autonomy to autonomous communities and schools, and which has been, in fact, translated into a rapid growth of private institutions in certain regions.

Looking deeper into these differences, some similarities arose, as the fact that despite the theoretical organization, schools' autonomy is in both countries mostly related to pedagogical organization more than to administrative actions, that schools are expected to develop their own curricula after two other levels of curriculum development (national and regional), and that now both public and private institutions are allowed in both territories (see Table 6.5). Regardless of the disparity in numbers of public and private institutions in each nation (see Charts 6.9-6.12), both countries invest a similar percentage of their GDP in education (see Chart 6.3), which is, according to World Bank data from 2012, lower than most other countries with high academic results.[81]

Regarding future guidelines, both countries have set objectives to reach in 2020 (see Sections 4.1.5.2 and 4.2.5.2), such as to increase graduates from secondary and higher education institutions, make early childhood education universal or almost universal, to raise the population attending tertiary education to at least 40% and to promote lifelong learning and quality standards. Both countries expect to design a better transition between education and employment, to keep offering equal education to everyone and to promote academic exchange.

Despite these convergences, Chinese challenges have arisen when tackling the consolidation of the 9-year compulsory education, the need to eliminate illiteracy, to decrease the gap between urban and rural areas' education and to improve education for migrant workers' children, or raise the average number of years of education. In addition, as with legislation, future guidelines highlight the need to improve ideological awareness and moral conduct, to endorse modern education with Chinese features, as well as physical health. Physical health is highly praised in China, where physical education is seen as essential for the body and the mind. This statement is later confirmed when studying the secondary education curriculum (see Section 4.1.5.4).

Most of these goals are already fulfilled in the European country, as seen in the fact that Spain already reached full rates of compulsory education and the expected years of schooling is already 17.1 (see Chart 6.1). In contrast, future guidelines in Spain focus on some milestones that have been already reached, or almost reached, in China. This is the case of the objective focusing on improving students' basic competences in reading,

[81] Finland (7.2%), Norway (6.6%), Vietnam (6.3%), Netherlands and France (5.5%), Switzerland (5%), Canada (5.3%), Estonia (5.1%). The GDP spent on educational expenses is similar to Korea (4.6%), and higher than a few countries such as Japan (3.8%) and Singapore (3.1%).

mathematics and sciences (see Chart 6.14). Since Chinese students have the best academic outcomes in the world, this goal is not included in the Chinese guidelines. In Spain, other purposes aim to reduce early leavers from education, and to promote foreign languages and periods of study abroad.

To fully answer this question, it is necessary to describe the general systems of education in which teachers must develop their future careers. The general system structures are described in Sections 4.1.5.3 and 4.2.5.3, and compared in Section 6.2.1. As seen in the juxtaposition (Table 6.3, Figure 6.1), general system structures mainly show convergences, organizing education into five stages, of which ISCED 1 and 2 are compulsory and free. There are two main divergences, (1) the internal structure is more flexible in China, with two divisions of compulsory education (5+4 or 6+3) while Spain has only one possible combination (6+4), and (2) compulsory education is one year longer in Spain, 10 years instead of China's 9 years.

5. How is secondary education conceived in each country, in terms of structure, curriculum, schedules, human resources, institutions, teachers' working conditions and teachers', families' and students' roles?

The data to answer this question is given in Sections 4.1.5.4-4.1.5.6 for China and 4.2.5.4-4.2.5.6 for Spain, as well as Chapter 6 tackling juxtaposition of general features. This is the last question regarding general features (organized from the farest to the closest components of the main topic of the thesis, starting from international, supranational and national perspectives, then going to national education legislation, to finally reach secondary education settings). In addition, this organization meets the elements included in the framework of quality proposed by UNESCO, displayed in Section 3.4 (Figure 3.3), and the structure of the thesis following this framework shown in Section 2.4.1 of the methodology (Figure 2.2).

Although some convergences are found in general secondary education, this level shows greater divergences, mainly in the stage of senior secondary education. Three characteristics stand out in this context: general conception, orientation and structure. The structure of secondary education converges in aspects including secondary education having compulsory (junior) and non-compulsory (senior) levels of education and secondary education finishing at age 18 (see Figure 6.1). The divergence is found in the

internal organization: while China has two internal structures for secondary education (3+3 or 4+3), Spain has only one (4+2).

In China, the compulsory level is conceived as finishing at age 15 and in Spain at age 16. After finishing junior secondary education, students can become workers in both countries, one year earlier in China than in Spain. This difference force Spanish students to finish compulsory education one year later than Chinese students, which added to other reasons such as economic possibilities or family needs, make total years of studies and access to senior secondary education longer and more common for Spanish students than Chinese, hence the differences in enrolment rates (see Table 6.4). This element is also a matter of debate in Spain, where some trends have proposed the extension of compulsory education until age 18. This modification would entail the need to rethink teacher education under a new perspective and competencies.

Chinese conceptions about general senior education are clearly focused on entering the best universities, and students bear high pressure from teachers and families during the three years. Besides this, the contents have a strong moral, social and political orientation encompassed in a single pathway for all students, which is combined with a solid exam-driven orientation. The modification of this kind of pedagogy has several limits, such as the need to plan a fair selection process, exigency from families and the traditional education system strongly based on Confucianism and merit.

In contrast, in Spain general senior secondary education is conceived as a common route in students' education and most students decide to choose the general path before a vocational school. One of the reasons to directly choose the regular path is that vocational programmes have historically enjoyed less prestige than university degrees. Still, senior secondary education is divided into different paths along students' interests (see Table 6.7); pressure is not as high as in China and contents mainly focus on the final examination in the last year.

This period has received some criticisms for lasting only two years, arguing that first-year students need to adapt from a compulsory and less demanding level to a post-compulsory level, leaving only one year to prepare for the university entrance examination, and no time to really tackle curriculum and knowledge besides strategies to pass the assessment.

Considering the nature of secondary education in each country, curriculum divergences are coherent with national standards and expectations. Curricula are framed on the already mentioned national philosophies and values, and subjects and classes are organized along the national centralized or decentralized system. As displayed in Chart 6.5, in China, elective classes are only taken in senior secondary education and their percentage is low, while Spanish students have the possibility to choose elective classes from junior secondary education, and the percentage can reach, in senior secondary education, half of their plan. This feature is also a sign of the homogenization of education in China, where the Government keeps strict control of education, quality standards and contents.

In reference to the curriculum, some subjects deserved to be mentioned as a clear divergence between China and Spain, and as a sign of the cultural background of each country. There are, in Chinese education but not in the Spanish plan, subjects in labour skills, moral and political thinking, and community and social practices (see Sections 4.1.5.1 and 4.2.5.1). In addition, confirming the importance Chinese education gives to physical education, Chinese students have eye exercises every day and the credits for classes of physical education almost match in junior secondary education and even exceed in senior secondary education, the credits for Chinese language, mathematics or foreign languages. This element is so relevant for the Chinese, that some schools even have a concentration in certain sports, dedicating several hours a day to cultivating sports from the beginning of formal education.

According to the data presented in Chart 6.4, the amount of a subject decreases in both countries with the advance in the academic level; however, the time students spend in school only increases in China, from 35 to 40 weeks (see Table 6.8). The stress for Chinese students in this period is clear: they have more school weeks and more homework time (see Chart 6.6) than Spanish students, and their entire future is decided at the end of this level. Though the Chinese authorities have repeatedly try to decrease the weight of the assessments, selection processes are mainly based on grades, hence the need to invest students' time in academic training.

However, students are not the only ones feeling the pressure in the Chinese education system. Considering the population of China, its high rates of enrolment in both junior and senior secondary education and the limited university places, especially in key

universities, teachers are forced to obtain the best academic results from their students, regularly dealing with higher student-teacher ratios than Spanish teachers (see Charts 6.10 and 6.11). This is one of the reasons, alongside the cultural background, lack of resources in some schools and competitiveness, for Chinese teachers to maintain a frontal pedagogy.

Not only do student-teacher ratios diverge between these two nations, but the type of institution in which they study and teachers work also diverge. As explained before, marketization of education has reached all countries, but the Spanish growth in private and co-funded/private schools is very clear (see Charts 6.10-6.13). China, in contrast, as reiterated in their legal documents and values, is keeping most schools public and all schools are under the supervision of the State, allowing few private initiatives to take place.

Regarding teachers' conditions, one of the divergences between China and Spain is the management of salaries, displayed in Table 6.10 and Chart 6.7. China pays its teacher's salary as civil servants and wages are managed by the regions, while Spain gives teachers the status of civil servants, and their salaries are managed by the autonomous communities. A consideration to make regarding these two kind of status is that salaries are very homogenous for all teachers in Spain but have a high disparity in China. Chinese disparities among regions is not only an issue regarding salaries, but almost any other educational matter, such as student-teacher ratios or dropout rates (see juxtaposition of Parameter 3), while the breach between rural and urban areas is known and is being tackled by the Chinese authorities (see legislation, 4.1.5.1 and future plans 4.1.5.2).

On the topic of salaries, both Chinese and Spanish teachers have an average salary (in China depending on the region), complemented with bonuses which include pay according to students' performance in China, but not in Spain (see Table 6.10). This kind of bonus is currently being considered in Spain, under a very critical perspective, since teachers working in difficult contexts could perceive it as a punishment more than an encouragement, and the fact that several factors are seen to affect children's achievements, such as family involvement, resources, other teachers, etc. In addition, it is often considered that this kind of bonus openly clashes with the nature of education, which cannot only centre on academic achievements while ignoring personal and global developments.

The last divergences with reference to working conditions regards teaching and classroom time (see Chart 6.8). Spanish teachers have less time to prepare classes, since their working hours are supposedly two hours less than the Chinese, but they have to teach seven and a half hours more. Chinese teachers are expected to spend more hours in school but not inside the classroom. This divergence can be understood under several perspectives. For instance, it could mean that Chinese legislation is more aware of teachers' need to prepare quality classes, while Spanish teachers are struggling to meet all the exigencies spending more time outside the official working time, or that Chinese workload and administrative duties are extremely demanding due to the high number of students. Regardless of the reasons, teachers' real working time is difficult to measure, since extra, 'invisible' time is not officially registered or controlled in any of these realities.

The last element, social perception towards teachers' work and role is mirrored in administrative initiatives (see Tables 6.10 and 6.14). In this matter, convergences arise in matters of policy intentions, placing teachers as an essential key to school success and publishing legislation which explicitly intends to increase teachers' social status and respect. Nonetheless, divergences are found in policy actions, such as the fact that the Chinese authorities started long ago to promote soft power strategies to raise teachers' status, and social real perception, due to the historical relationship between education and social status. As a result, teachers' status is higher in China, where in addition comprehensive policies are trying to attract, select and keep the best candidates. Spain is still lacking a broad dynamic to increase teachers' status and career attractiveness, which needs to involve policies for all professional teaching stages, and in which all interested parties are implicated (administrations of different departments regarding society and education, teachers from all kinds of education institutions and families).

The reflections of such perceptions are also shown in the social and education role of families and students. In Spain, history and culture have generally undermined the role of teachers, whereas Chinese teachers are historically highly valued (see Sections 5.1.1 and 5.2.1). Still, Chinese families and students commonly look up to teachers to deliver knowledge, and the main responsibility in students' achievement is assumed by the students themselves and their families. Accordingly, in the exam-driven methodology in China, Chinese students obtain the best academic results in PISA, while Spanish students approximately meet the average of the European Union and OECD (see Chart 6.14). In this situation, Chinese teachers are expected to teach the whole curriculum and be fluent

in their explanations, rather than to give individual answers to students' needs. Their main goal is academic knowledge. Spanish teachers are, however, expected to have fewer frontal methodologies and more communication skills (Table 6.14).

6. What are the current dilemmas and challenges that each country has to confront in secondary teachers' initial education?

Following the design of the thesis, Sections 5.1.1 and 5.2.1 tackle the challenges and dilemmas of each country regarding secondary teachers' education. These two sections are essential to realize how all the features analysed throughout the thesis have consequences in the current systems of teacher education. Globalization and international organizations have an impact on nationwide realities; however, the profundity of this impact depends on national choices, resources, history, culture, philosophies, objectives and priorities. Education authorities adapt their systems, taking the guidelines they consider positive for their own national purposes.

In this sense, as expressed in Sections 5.1.2 and 5.2.2, claims in both countries concern the shallowness of the latest reforms, which have failed, for instance, to truly increase the weight of pedagogy, psychology and the practicum. Both countries are now facing challenges to improve the teacher education curriculum to better match social development and to prepare teachers to manage students' needs. Societies are changing faster than any teacher education programme, and the solution involves a change from subject-based teaching to comprehensive teaching organized in learning areas, modules and credits in China, and a design based on competencies in Spain.

Not only curricula, but a balance between the specialization of teachers in one subject and their generalist knowledge, as well as the organization of teachers in closed departments, are subjects to be reconsidered in both countries (see Sections 5.1.2 and 5.2.2). This type of organization is currently preventing teachers from different fields and levels cooperating on academic exchanges and coordinating their relationships with other teachers and the students. Historically, and due to the fact that teachers usually take care of their classes alone, teaching has been understood as a solitary career, limiting the level of cooperation between teachers of different subjects. As a result, cooperation is one of the main challenges in teachers' background, not only among teachers, but especially between different institutions of education, such as universities, secondary schools and lifelong learning institutions.

Another convergence between Chinese and Spanish challenges belongs to the selection process of student teachers, though the emphasis falls on dissimilar characteristics. As explained in Section 5.1.2, China is trying to reform its selection procedures to deal with the overemphasis on exams. However, because of the large numbers of students, finding a fair and impartial system is very tricky. In contrast, Spain is dealing with a very vague selection (see Section 5.2.2), allowing a large number of students to enter teacher education programmes and a large number of universities to offer such programmes. This lack of coherence between teacher education supply and labour market demand, among other reasons, keeps lowering the traditionally low status of teachers.

Divergences in dilemmas, which in turn guide future agendas for teacher education, are clearly related to the national challenges. On one side, China needs to find an equilibrium between quantity and quality, and a balance in both quantity and quality among regions. Chinese demands for education have to meet the requirements of rural and urban areas, and to cover quality standards for families with a high disparity in income and resources. Due to the Chinese history of education, teacher education is also trying to adjust the importance of the student-centred perspective, to encourage individual growth, creativity, and student collaboration.

However, these modifications of education philosophy somewhat belong to the 'borrowing history' mentioned in Section 5.1.1, and the need to adapt education to Asian perspectives and notions, tackled in Section 4.1.4. The Chinese authorities are also confronting the challenge to find a balance, or middle way, as explained in Section 4.3.1, between western methodologies and Chinese traditions and culture.

On the other side, Spain has to meet its own specific challenges in secondary teachers' initial education. At national level, the instability of legislation (see Section 4.2.5.1) affects the establishment and valuation of the programmes, which in turn, hinders the need to increase teachers' status and self-esteem (see Table 6.12). Simultaneously, reforms require certain financial support and resources, which are not always available. Designing new plans that are later evaluated by a quality agency is human resources- and time-consuming, a waste for certain programmes which are frequently changing.

Not only legislation instability but the disparity of fees among universities, mainly private institutions, is a dilemma in the Spanish context, a sign of the already mentioned marketization of education, which lowers the status and professionalization of the career.

Other challenges address the need to promote innovation and improve practical experiences and the possibility to include a common basis for all teachers.

7. What models of secondary teachers' initial education systems are carried out in China and in Spain at the national level? How are these models defined in terms of characteristics conceived as core components of secondary teachers' initial education systems (institutions, pathways, curriculum, qualifications and selection)?

In general, as shown in Table 7.1, secondary teachers' initial education system in China takes place in tertiary education institutions in both concurrent and consecutive models. The curriculum is detailed by each university following certain national guidelines, which are designed in both 3-year vocational programmes and 4-year undergraduate degrees, though certain universities also offer Master's programmes. The official curriculum proposal dates from 2012 and classifies the plan in five learning areas (see Table 7.2). Besides the specific classes for teacher education and the speciality, all Bachelor's degrees share some core classes, such as military training or Chinese culture and history (see Table 7.3).

The weight of pedagogy has traditionally been scarce, but normal universities and new tendencies are raising this percentage (see Section 5.1.1 and Charts 7.1 and 7.2). All secondary teachers' initial education programmes include practice, but this component is criticized for its low harmonization and the difficulty in carrying out a useful practicum due to tutors' overwork and pressure during that period (see Section 5.1.2 and Table 7.4).

As seen in Table 6.11, in China, qualifications mainly belong to ISCED 6, but it is still possible to find ISCED 5 for a few teaching diplomas, and ISCED 7, mainly lasting 2 years, in some universities. Qualifications are valid in the whole country but teachers must register in the region they want to teach (Table 7.11). That right is usually acquired when working or studying in that region. There is no final exam to obtain a qualification, but there is an alternative exam to directly grant such a qualification when coming from other fields (see Table 7.12). As displayed in Tables 7.14 and 7.15, there are two types of student selection, but the most common is regular selection based on the grade in the Gaokao, the preceding education level. Some normal universities also select outstanding students for their free-fee policies (see Table 7.16).

In the case of Spain, secondary teachers are always prepared in tertiary institutions in a consecutive path (1-year Master's). Curriculum organization has been nationally established since 2007 (see Table 7.2), though universities have certain level of freedom

to distribute some credits and to design the classes included in each of the three learning areas. Plans have to be in accordance with the EAHE, and programmes have to be calculated to add up to 60 ECTS, at least 16 for the practicum (see Section 5.2.1 and Charts 7.1 and 7.2).

As in China, the period of practicum raises some criticisms due to the lack of harmonization among universities and the lack of coordination between schools and universities (see Section 5.2.1 and Table 7.4). Once the programme is complete, the students receive a qualification in secondary teacher education. There is neither a final exam nor an alternative exam to obtain such a qualification (see Table 7.12). The only official qualification belongs to ISCED 7, and qualifications are valid nationwide (Table 7.11). Student selection is up to each university, but the minimum requirement is having an undergraduate degree, which gives access to a Master's level, in a specific subject (related to any of the areas taught in secondary education) and at least B1 level in a foreign language (see Tables 7.14 and 7.15).

8. What are the teaching skills (profile of competencies) required in each country for future secondary school teachers?

In both countries, competencies, understood as transversal foundations or professional standards, are related to knowledge, skills and attitudes. As evidenced in Section 7.3, related to Comparison Category 8, these components show mainly convergences between the two countries. Their national proposals, as well as the supranational proposal of the European Union, include competencies to develop and consolidate education policies, each of them in line with their own settings, as well as professional development. The organization of competencies in categories differs from one document to another, but the contents are very similar (see Tables 7.5-7.10).

For instance, the area of knowledge (Table 7.7) includes similar components such as subject knowledge, pedagogy, evaluation methodologies and curriculum design. Competencies regarding teachers' attitudes (Table 7.8) stress the need to be more understanding of students' diversity, flexible and critical attitudes to improve teaching practices. Teachers are encouraged to develop both research and ICT skills and to take an active role in their schools (Tables 7.9 and 7.10).

One of the divergences is that Spain designs its secondary teachers' initial education programme around a competency profile, while China designs the standards for all teachers and secondary teachers' initial education programmes are planned under the

traditional subject-based perspective (see Table 7.5). Other divergences belong to philosophical and political thinking, such as the stress on communist or democratic values (Table 7.6), or on cultural understanding as collaboration with the community, which is not highlighted in the European or Spanish proposal, or the relationship with social services, which is not stressed in the Chinese scheme (Table 7.10).

9. What are the suggestions released by international organizations addressing teachers' initial education quality standards?

International and supranational organizations are promoting open, flexible, economic but high-quality policies in which all countries have room to improve, as shown in Table 5.16. This question is treated in Section 5.3, where standards are organized around the comparison categories of the thesis regarding teachers' education (CC. 6 to CC.10).

In the sixth dimension, institutions and paths, international standards enhance countries setting up flexible structures, part-time or distance-learning programmes, designing consecutive or post-graduate programmes, or establishing common components for different types of schools and levels. With this advice, international organizations are trying to open the profession to a wide range of people, adapting teacher education programmes to personal situations as much as possible. The possibility to enrol in these programmes is sometimes limited to people with full-time dedication and specific and limited profiles. With these recommendations, teacher education become easily accessible, but further standards are necessary to maintain the quality of the programmes.

In this matter, international organizations' preferences are exposed in the proposals for curriculum designs (the next comparison category). They promote teacher education strategies that focus on challenging classrooms and give teachers the necessary knowledge to diagnose students' problems, design solutions, carry out research and work using ICT. These elements, as seen in previous sections, are part of the national contexts, challenges and dilemmas that need to be tackled in most current societies. Besides, according to international proposals, all these components have to be included in programmes with an adequate balance between theory and practice.

Again, as in the national guidelines, international organizations place great emphasis on the practicum. They maintain the relevance of having practical classroom experience,

if possible entering the classroom early in the programme. International organizations focused on education, also stress the role of mentors and the need for students to receive support during this period.

The suggestions of the eighth comparison category, professional competencies, are rather imprecise, since competencies belong to specific national profiles which should be in line with national policies and goals. However, international proposals encourage nations to design clear and concise profiles for teachers, and to include research competencies. Competencies regarding knowledge, pedagogy, cooperation with other agents involved in schools, and lifelong learning are also underlined.

Regarding the comparison category of qualifications, international organizations recommend having a national qualification framework, the assessment of qualifications by an independent agency of quality and giving credit for significant experience, among others. Again, quality and quantity are a concern for international organizations, which further recommend, in the teacher selection comparison category, having teacher education institutions with high entrance standards and statuses to prepare candidates with enough knowledge about the subject. In this sense, the guidelines urge the planning of comprehensive selection processes, assessing candidates' motivation, skills, knowledge and personal qualities.

Having answered all the questions related to the first General Objective, it is possible to confirm the first Comparative Hypothesis:

The Chinese and Spanish secondary teachers' initial education systems take place in higher education institutions and have exclusive national characteristics as a consequence of several factors, including both educative and non-educative features.

8.1.2. HYPOTHESIS 2

Questions 10 and 11 were designed to meet the second General Objective, "To detect convergences and divergences between Chinese and Spanish secondary teachers' initial education system, as well as possible international trends and guidelines in secondary teachers' initial education". The answer to these questions is as follows:

10. In which aspects do the Chinese and Spanish models converge or diverge?

When considering these conclusions, it is important to highlight two characteristics for both countries, which are, in turn, a convergence between the two national realities and along several international agendas. The first is the recent implementation of a new secondary teachers' initial education programme and standards for academic curricula in both countries (see Table 7.2). Likewise, both countries are still waiting to evaluate their recent education guidelines after a period of stability. The second is the fact that both countries are dealing with great economic and cultural challenges and are still both locating teachers and teacher education as key elements of education quality (see Sections 4.1.5.2 and 4.2.5.2), proof of national interest in teacher education.

In the Comparative Categories regarding institutions and paths (CC.6) and qualifications (CC.9) a clear trend is confirmed by both countries: all future teachers for secondary education are prepared in higher education institutions, in programmes which lead to a tertiary qualification (Tables 7.1 and 7.11). In this sense the Master's has been, undoubtedly, a big step in secondary teachers' initial education in Spain. In this matter, China has improved its systems by moving all teacher education to higher institutions (see Section 5.1.1 and Tables 7.2 and 7.11).

In addition, the same qualification, obtained in higher education institutions, is the only requirement in both countries to prepare teachers for working in junior and senior secondary education (see Table 7.11). Teachers for the lower and the upper level are prepared in the same programmes (in some exceptions, due to the teacher shortage, China may prepare teachers for junior secondary education in a lower level. However, this situation is progressively being eradicated).

This element is far from being trivial for this study, since secondary teachers have to deal with children in compulsory education as well as in post-compulsory education (see Figure 6.1). Students for these levels of secondary education have completely different motivations, educative contexts and objectives, but none of the countries offer different programmes or paths taking these characteristics into account.

Divergences in the matter of qualification and institutions and paths address concrete details such as the level inside higher education institutions (undergraduate or Master's) and the flexibility of entering the profession (Tables 7.1, 7.11 and 7.12). Although China still has certain programmes in teachers' colleges, considered as ISCED 5, the tendency is to set all programmes within ISCED 6 and 7. In this sense, China highlights the role

of normal universities as key institutions for preparing teachers, while Spain prefers comprehensive universities, organized by faculties.

The programmes and pathways differ slightly between China and Spain, and even among Chinese universities (Table 7.1). China is more flexible and allows universities and other tertiary institutions to plan different paths at different levels. Universities can offer both concurrent and consecutive pathways, though legislation stresses programmes for concurrent models. Spain, in contrast to this variety, has only a Master's programme, which makes harmonization among national programmes easier.

Other convergences regard elements belonging to the curriculum design and organization (CC.7 in Tables 7.2 to 7.4). Secondary teachers' initial education programmes unquestionably tend to comprise both subject knowledge and pedagogy. Compared with previous plans, both countries are progressively increasing the weight of pedagogy and the stability of their programmes.

This increment is perceptible when analysing the percentage of subject didactic classes, out of the total programme (Charts 7.1 and 7.2). The weight of pedagogy and teaching skills subjects is progressively getting closer to 20% in both nations. In addition, the organization of the subjects is slowly changing from a clear break between subject knowledge and pedagogy towards a more integrated model. Nonetheless, completely integrated models, in which knowledge is planned around competencies and the differentiation between practices, knowledge and pedagogic subjects is vague, or module models, where students have a high level of freedom to plan their own academic degree, are non-existent.

Current programmes include classes such as "teaching and learning of [subject]" or "basis of [subject] pedagogy" (Tables 5.4-5.7, 5.11 and 5.13), which show universities and administrations' concerns about teachers-to-be's previous conceptions of education and the need to modernize methodologies, curriculum plans and evaluation systems (Sections 5.1.2 and 5.2.2).

In this comparison category, curriculum organization, the fundamental divergence is the existence of a core curriculum for all degrees in China, but not in Spain (see Table 7.3). Spanish teachers may be missing the opportunity to work on basic skills to further improve their work, such as ICT, foreign languages and research skills. This fact shows

an area of improvement towards a better coherence between what is promoted in international, supranational and national guidelines, and the relevance of these kind of skills, and what later takes place in universities. It would be interesting to evaluate whether all these skills are being assumed to be transversal competencies, and the results of such planning.

Conversely, a convergence between both countries is the lack of a specific core curriculum along all teaching programmes for different levels (see Table 7.2), which would ease the movement of teachers from one level to another. This movement is often promoted separately for teachers within early childhood and primary education and within junior and senior secondary education, but in both countries, an invisible barrier separates teachers on one side from the other.

As explained in Parameter 21 (Table 7.4), the principal divergence in this comparison category is found in the official time dedicated to the practicum, theoretically longer in China, but practically implemented as in Spain. The most noticeable convergence is the limited national harmonization and lack of structure of this period. The main responsibility devolves upon each university and neither country has specific guidelines for this part of the programme. In fact, as detected in these two comparative areas, the practicum is slowly taking a central part of teacher education as a concept, but not as the nucleus of the programmes (see Sections 5.1.5 and 5.2.5). The practicum is not the centre of teacher education programmes, but a supplement to the theoretical classes.

Convergences in this matter are also found in the types of practice. Practicums are diversified into types (observation and participation or active), and both countries require a final thesis to reflect on this learning experience (see Table 7.4). However, the time to reflect about this practice is scarce (mainly in Spain) and neither of the countries have designed national guidelines for the thesis or its evaluation.

As displayed in Table 7.4, another tendency in the practicum is the time at which it takes place and the number of periods. Most universities set it at the end of the complete academic major (the last year in China and last semester in Spain), mainly for practicums in which students have active participation. This fact shows the disconnection between theory and practice. It is vital for further consolidation of teachers' identity that programmes integrate theory and practice, where student teachers can be critical of their

own practices and have more than one practical experience to develop a sense of professional growth.

One of the central elements for certainly developing a useful practicum, is the figure of the mentor or tutor. Though an analysis of this figure has not been included in this research, the studied national documents did not stress this agent. Globally, tendencies are starting to analyse how to select better teachers to take this role, trying to establish requisites and general functions. Policies in this matter are rather new and there is no consensus or general trend, apart from the fact that there is no concrete or detailed trend. Hence, another convergence is the fact that tutors' role and selection have been left aside in most proposals and legislation, or are rather imprecise (see Sections 5.2.5 and 7.2.4). The requirements for becoming a tutor, seminars or update education that should be offered to these tutors, the time they will be able to invest in this role and the professional consequences or rewards are still to be designed and implemented.

The comparison category discussing professional competencies (CC.8) underlines further convergences and divergences. Teacher education may not generally be designed through a competencies profile, but aims to reach a certain competencies profile (see Table 7.5). Competencies have become a clear tendency in the international context, not only for teacher education but for wide-ranging professional profiles. National contexts may show small differences, but general convergences are obvious. Countries are widening their programmes to include skills, attitudes and knowledge. In reality, competencies appear in national and supranational documents, but their application and implementation is still low and confusing, since traditional methodologies and curricular organization predominate (see CC.7) and are slow to change. Indeed, analysing universities' concrete proposals, the plans show how curricula, evaluations and practices keep focusing on traditional knowledge expressions (subjects, traditional exams, concrete objectives of knowledge, etc.).

In light of the data (displayed in Sections 5.1.6 and 5.2.6 for national data and Section 7.3 for juxtaposition and comparison of this dimension), the comparison category of professional competencies principally shows convergences, though organized in different categories and under different philosophies, matched to each country's political organization. Knowledge, professional attitudes and basic skills mostly show convergence, and divergences are rooted in the degree of relevance given to each

component, such as the teachers' attitude towards students and moral values highly noticed in China or the values of inclusion, multiculturalism and human rights, further stressed in Europe.

Competencies comprising strategies for developing a lifelong learning plan, along with modern trends of education, are being progressively promoted (see Table 7.6). Consequently, teachers have to have the possibility to enter a system where professional development is encouraged and rewarded. As happens in China, this rewards cannot be limited to economic incomes, but to comprehensive policies regarding the whole of society and the educative community (see Table 6.10). In this context, governments have to be ready to invest in lifelong learning education and to improve teaching attractiveness as a way to progress in both economic and social cohesion. In turn, these policies will increase teachers' identity and professionalization, which will make the career more attractive to better candidates. The beginning of these comprehensive policies must start in initial teacher education, but meet teachers' future education and working conditions.

The selection of student teachers, the last comparison category (CC. 10), tackled in Sections 5.1.8, 5.2.8 and 7.5, highlights another convergence: selection is still mainly based on academic achievement from a previous education level. Some universities in both national contexts are progressively including other factors such as interviews or letters of motivation, but these cases are still exceptions, and comprehensive valuation depends on universities' initiatives and not on national or regional guidelines.

Certain divergences in this category of comparison are motivated, not exclusively by the topic itself, but by the inherent character of higher institutions in each country. Chinese students struggle to get into good universities and strong selection is done at the moment of starting higher education (Sections 4.1.5.3, 4.1.5.6, 5.1.8 and 7.5.1). This competitiveness motivates higher minimum marks for all degrees, while Spain exclusively reserves the higher profiles and marks for certain majors such as medicine or sciences (Table 7.14).

The strategies for selecting students to become secondary school teachers need to assure that the body of secondary teachers is formed by compromised, motivated, talented and high-level candidates, who will be ready to be mentors for students and younger teachers, and who will fit and actively participate in multidisciplinary and active schools, as well as lifelong learning initiatives.

Selection must not be more restrictive, but be made with more coherence. Taking into consideration previous experiences, interest, motivation and personal traits is important, but only comprehensible when the characteristics of the workplace, the society, the type of students and their needs, as well as the prospects that administrations can offer to candidates, have been analysed. This prior analysis is necessary to articulate a process in which teachers are prepared and have the possibility to accede to a certain career and professional development, but also to plan the tools to succeed and to avoid burnout or static professions. Only by offering a clear and high-level professional path can universities be highly selective with their candidates.

In this comparison category, a significant divergence between China and Spain is the existence of comprehensive policies tackling teachers' working conditions and education in China and the lack of this kind of policy in Spain (see Section 6.2.2 and Tables 6.10 and 7.16). China has a long tradition of comprehensive policies, since Asian cultures understand every element only in relation to other components (the concept of harmony tackled in Section 4.3.1). The same methodologies are found in Chinese medicine, in Feng Shui or the Yin-yang equilibrium. The Chinese understand the world through relationships, so it is not surprising that educative plans are bound to certain comprehensive policies.

11. Do the systems of secondary teachers' initial education in these countries concur with international quality standards?

Besides comparing Chinese and Spanish teacher education, and because "policy production in education is not only framed by these new structures within nations but also by the emergence of supranational structures" (Lingard, 2014, p. 88), one of the objectives of this thesis was to compare both systems with international and supranational quality standards, trying to detect international trends.

In this matter, national trends meet most of the international proposals, though China, due to its variety inside the territory, is closer than Spain in three of the indicators (see Table 7.23 and Chart 7.3). Indeed, as result of the analysis in Chapters 6 and 7, and when comparing Chinese and Spanish initiatives with international standards, it is possible to affirm that both countries follow similar trends. This is supported and promoted by globalization and by modern conceptions of education, since "perhaps because educational achievement has often been associated with elite status, the

organization and focus of education nearly everywhere in the modern era reflects international influences, some more forceful than others" (Samoff, 2003, p. 53).

Compared with the guidelines proposed by international organizations (shown in Section 5.3), regarding teachers' initial education, both countries confirm global tendencies and seem to follow similar trends in most of the topics, such as professional competencies, the existence of common preparation for junior and senior education and the evaluation of the university programmes by an external agency (see Tables 7.17 to 7.22).

Because China has multiple pathways and deep differences among provinces and universities, certain international indicators are partially followed. This is the case with indicators addressing practicum timing in undergraduate or Master's programmes, or the opportunity to move to a different course if a student teacher's motivation changes, which is possible in undergraduate programmes but not in Master's degrees that specifically tackle teacher education.

In addition to these variations, in general terms, Chinese policies are more in line with international guidelines than Spanish policies (see Table 7.23 and Chart 7.3). For instance, China meets the indicators of flexibility in teacher education structures, programmes with longer practices and in which students get into the classrooms earlier, high entrance standards in high-status universities and the establishment of incentives to recruit better candidates.

It is worth mentioning that most divergences between national and international proposals are, paradoxically, convergences between China and Spain. This is the case in the lack of a national consensus about collaboration between institutions and schools, the fact that students or qualified persons from other areas cannot enter the profession and earn a salary without the proper and specific qualification, qualifications do not include communication skills or personal qualities and selection processes do not comprise an assessment about candidates' motivation, skills or personal qualities.

Having answered all the questions related to the second General Objective, and in light of the findings of the study, it is possible to affirm that secondary teachers' initial education in both countries, China and Spain, have common trends, and that the university programmes, dynamics and characteristics have convergences. These convergences are also

found when comparing them with international organizations' guidelines, hence it is possible to confirm Comparative Hypothesis 2:

> *Despite the divergences in some components, there are convergences between both countries' modern systems of secondary teachers' initial education and international trends, showing Euro-Asian convergences.*

8.1.3. HYPOTHESIS 3

The answer to question 12 was trying to reach the third and last General Objective, "To propose possible reforms in the Spanish model of secondary teachers' initial education in the context of the international trends detected". This answer is structured according to the findings from previous sections and according to the general organization of the thesis.

12. According to the findings, what does the Spanish secondary teachers' initial education system lack?

The Spanish system's weaknesses relating to the comparison category of institutions and paths are appreciable in its low flexibility and the non-existence of alternative pathways (see Table 7.1), while it is extremely positive and concurs with international and supranational guidelines, that all teacher education takes place in tertiary institutions (see Tables 7.1 and 7.17). The fact that only a 1-year Master's grants the possibility to work as secondary teacher gives few options to accede to teaching for other professionals or people who have started their career in other fields.

Initially, the Master's represented an improvement, boosting national harmonization and placing secondary teacher education as a national priority. It also promoted higher harmonization among universities and tried to improve the flaws of programmes from the previous system (CAP) which were, sometimes, only a mere formality to obtain certification (see Section 5.2.1). Now, certain adjustments could keep improving this Master's.

In this matter, the flaws that can be further developed in the dimension of curriculum organization (see Section 5.2.5) refer to the better organization of the practicum, giving universities general guidelines and recommendations for planning the final dissertation, a better relationship between universities and secondary schools, and a better common basis between secondary teachers' education and other levels' teacher education. Practicum periods seem short or lacking national standards of quality. Each university

distribute them according to their own criteria, often at the end of the Master's (Section 5.2.5 and Table 5.13). Hence, it is evident that practice and theory lack connection, and the feedback between the areas is not fluent.

In addition, the absence of a common basis for teachers' education limits the movement of teachers inside the general education system, even between compulsory stages such as junior secondary education and primary education. Though the curriculum design of the Master's shows some weaknesses or divergences from supranational or international proposals, it also presents several strengths, such as the fact that students have a full year to focus on pedagogy and education, or the explicit relevance of the practicum, the credits for which exceed those for generic knowledge (see Table 5.11).

The Master's has another strength included in the comparison category of professional competencies. Not only it is designed around a professional teacher competencies profile (see Section 5.2.6), which already includes teacher education in a more comprehensive perspective of education, but the Spanish profile highly meets the European notion of competencies, including similar tendencies and bases for developing a professional teacher.

This professionalization process is also endorsed in the dimension of qualifications, always asking for at least an ISCED 7 (see Table 7.11). In this category the aspect of improvement relates to better coherence between what it is legally required (having a Master's in any concentration) and what it is practically needed (knowledge in a certain subject and level). Universities design their own qualifications under a single or double concentration (for instance geology and geography) with no consequences to later accede to the profession, which could lead to uneven plans. Higher consistency in the general requirements and the specific specialization could be constructive when trying to increase teachers' status.

Nonetheless, while this lack of requirements (any person with a Master's in any speciality in a certain area can accede to a teaching job in secondary education in any other similar speciality), could also be understood as a way of adding flexibility for the profession.

Though it cannot be considered an alternative path, since they have to obtain the specific Master's degree in secondary teachers' education, it can be understood as a way

to open the professional career to other professionals with deep knowledge in a certain subject but no official diplomas in that exact subject. For instance, a candidate with a Bachelor's degree in a field and expert knowledge in other fields, could pass the university assessment in their 'other fields' and enter the Master's degree in a 'new' concentration.

The process of increasing teachers' status is also improvable through the student teacher selection process. One of the central weaknesses in Spanish secondary teachers' initial education is already the first step in entering the programmes, where the selection is superficial and excessively broad (see Section 5.2.8 and Tables 7.13-7.15). The responsibility belongs to each university, which usually do not design exhaustive assessments of students' global characteristics such as motivations or personal traits. The main element is the grade from a previous Bachelor's degree which has no relationship with education. Though some universities, mainly private, are starting to establish more comprehensive selection processes, the lack of a national framework of standards or general criteria is leading to a pool of secondary teachers obtaining the same qualification but with little harmonization in their predisposition towards teaching.

Having answered this question, and bearing in mind the information extracted to answer the questions of the first two hypotheses, it is possible to confirm Comparative Hypothesis 3:

International trends and Chinese secondary education and its secondary teachers' initial education plan may shed light on the Spanish educative system, showing areas for improvement and reflection.

The next section tries to extract from this research some future guidelines for Spain, which may help to improve, or, at least, to reconsider the current system of secondary teachers' initial education.

8.2. APPLICATION: PROPOSALS FOR SPAIN

This section aims to offer some hints or recommendations to better adapt the current Spanish secondary teachers' initial education system to the social and education needs caused by the interaction of multiple factors of the 21st century, such as globalization, the almost-universal access to compulsory education including junior secondary school, international exchanges and collaboration in multiple contexts, the new trend of designing professional profiles in terms of competencies and the establishment of international educative guidelines, among others.

The recommendations are organized along the structure of the thesis, separated into general features regarding education and teacher education. The first subsection is structured in three areas: (1) territorial, socio-political and economic features, (2) secondary education system, students and families, and (3) secondary education institutions and teachers. The second subsection is divided by the five comparative categories regarding teacher education: (1) institutions and paths, (2) curriculum design, (3) professional competencies, (4) qualifications, and (5) selection.

8.2.1. GENERAL FEATURES

The recommendations of general features are based on Chapters 4 and 6 for national data and juxtaposition and comparison of general features. "The analysis of any teaching experience involves the need to consider education as a phenomenon inherent to the context that surrounds it" (González Villarón, 2015, p. 573), therefore this research could not omit the indicators related to the general context which affect education. To make teaching an attractive career, schools need first to be made attractive workplaces and, since teaching is a very demanding career, it should also be an attractive choice which can combine personal and professional growth.

In Spain, all students accede to junior secondary education and a large percentage later advance to the senior level. Because of the widespread growth of secondary education, teachers need to know and encompass a bigger diversity and deal with the diversification between junior and senior secondary education. Not specific for teacher education, suggestions to improve the entire system and initiatives that could help to reach these objectives and ease the challenges could be as follows.

<u>Territorial, socio-political and economic features</u>

- Legal organization for education needs more stability to implement flexible reforms based on a firm system. Education can benefit from an agreement on basic lines for education among the different parties and society. This kind of legislation must make notions of education as dynamic and able to adapt to new challenges easier to promote.

- Comprehensive policies should be established endorsing social responsibility towards education, opening channels of participation and promoting education as a common concern. Strategies of soft power should endorse the importance of education and teachers.

- Because of complementarity between supranational, national and regional policies, it is important to return and meet the needs of micro contexts, finding a fair balance among autonomous communities and schools' independence and a general framework which assures national quality and cohesion with modern trends.

- The use of economic conceptions in education is leading to a point where education is becoming a business and teachers can be considered factory workers, expected to extract certain academic results from their students. Education must bring a growth in the economy, but schools cannot be understood as a direct source of wealth creation.

  The application of economic trends in education is contradictory to the core objective of education itself, at least if expecting to obtain integral development for each student's possibilities and to promote the notions of inclusion and multiculturalism. Schools and teachers cannot be understood as commercial agents but as founders of social, economic and cultural progress.

- It would be positive to endorse policies that promote students, teachers and teaching students' exchange with China and other countries outside Europe, or with such different educative systems with excellent academic results. These exchanges could benefit both parties to better understand a world that is each day more connected.

<u>Secondary education system, students and families</u>

- Schools are a reflection of each society; therefore, Spain does not only need better schools or better teachers, but a better society. Schools have to keep working on improving social conscience and interrelation, and promoting values such as respect, social participation and civic conscience. Nonetheless, respect towards teachers and education cannot only be worked on inside schools. It is essential that families, media, society and administrations create a stronger network, in which everyone participates.

  Schools and teachers can take a highly relevant role in the dynamics of social participation at a micro territorial level. Simultaneously, creating better social understanding, teachers would increase their social status, but most important, they would not be disrespected

by students; which in turn, would make the career more attractive. As stated by Samoff, "It seems clear to most of the education community that effective reform requires agendas and initiatives with strong local roots and the broad participation of those with a stake in outcomes, including not only officials but also students, parents, teachers, and communities" (Samoff, 2003, p. 85).

- Spain has a high level of secondary education dropout rates and academic results in international assessment are improvable; teacher education should help teachers to understand the reasons for this situation and teacher education and administrations should offer tools to improve these desertions and enhance students' results. However, the improvement of the Spanish educative system cannot devolve solely upon teachers but must rely upon the whole educative community, families, society and the government. Only with comprehensive policies can a context with such a high number of social interactions meet education needs and expectations.

- Institutions behave as closed systems with little real contact and exchange with other institutions. It is necessary to improve communication among institutions and create fluent relationships between schools and universities, in which members' participation is understood as essential (teachers, schools/universities and families).

- The repercussions of PISA are still to be seen and must be taken and analysed with caution. Improvement of academic results can only be reached through comprehensive initiatives, which may not exclusively focus on this kind of knowledge. For instance, in China most provinces are replicating Shanghai's system and trying to understand and adapt it in their provinces. Choosing good examples from the Spanish national context may help to understand good and effective practices within the territory and culture.

- The stress of international assessments must also be taken carefully, since it is essential that prior to the establishment of any comprehensive initiatives, the country analyses their priorities. It is necessary to find a balance between competitiveness and collaboration, between performance and social integration. Before taking educative decisions, it is necessary to know what kind of society you want to create.

- Current pressure around academic results in secondary education (and lower levels) while designing and promoting education in terms of competencies can create a lack of cohesion between administrations' expectations and the goals of education.

  Teachers with vocation and passion can lose attraction to the career when being pressured to use traditional methodologies focusing on subject knowledge and limiting creative teaching and learning experiences. These academic goals could lead to a situation which avoids a complete vision of education, putting aside relevant and modern needs such as conflict resolution, creativity, the use of ICT or empathy, since they are not tested in regional, national or international assessments.

- According to the exposed data, Spanish students use too many portfolios, take too many standardized tests and use futile memorizing approaches in mathematics; seeing the academic results, it appears that these strategies are not having the expected effects. When preparing future teachers, it is crucial to emphasize other methodologies, more adapted to the 21st century, and to tackle innovative methodologies in the areas where students show the greatest difficulties.

- Cultural conceptions are inherent to every teacher and student. However, some positive examples can be extracted from Asian cultures without abandoning Spanish beliefs. Looking for a middle way between the Chinese way (students have too much pressure and are fully responsible for their results) and the western way (often too linked to IQ, external inputs or specific abilities), could help students to increase the concept of hard work and break the classic dichotomy between having the necessary abilities or not.

- Secondary education has a high percentage of electives classes, which gives students and schools great autonomy in their learning process. Still, a suggestion could be to design secondary students' learning process in a system similar to that used at university. As in China, the establishment of credits in senior secondary education may meet two objectives: help students through the transition from secondary education to university and promote and ease international exchanges at lower levels for both students and teachers.

Secondary education institutions and teachers

- Areas with a high concentration of difficult classrooms need support and resources. A common practice in China is to set up pilot programmes in regions or schools to test initiatives' results and needs. It could be possible to establish pilot programmes in certain difficult areas as a way to start tackling current problematic situations in schools. It is essential that these schools receive the necessary resources to carry out the projects.

  Successful experiences can later be extended to other schools in similar situations. Teachers implicated in this type of project could help new teachers in the implementation of innovative strategies and methodologies, temporarily transferring some teachers from one school to another or allowing teachers to dedicate certain time to go to other schools and help with the projects.

- The imbalance between public and private institutions has consequences for the whole nation. One of the imbalances is the distribution of students with specific needs. The sharing of students with special needs and immigrants has to be more equitable between public and private institutions, avoiding first and second class schools. Sharing challenges in education and having heterogeneous classes in all types of schools obliges general policies to meet real social needs, avoiding a partial view of society. Only by confronting the existent social state as a whole can education be improved, avoiding the creation of ghettos, which lower educational quality, affect social cohesion and discourage the best candidates from choosing this profession, especially in public schools.

- Teachers' temporary exchanges: an interesting initiative which could have positive consequences in Spain is the exchange of teachers and school heads among schools with high and low achievements or schools with different methodologies and students from different socio-economic backgrounds.

- Though it is not the main topic of the research, it is necessary to rethink and study a system of professional development, with rankings or incentives. Owing to the large diversity in Spanish classes, the incentive should not be related to students' performance but to teachers' dedication and qualifications. The implementation of a mechanism which

incentivizes teachers and eases the exchange of information among all school members and other schools can stimulate teachers' dedication.

- Salary and status progression could be related to experience, not only measured in years but including multiple factors such as participation in conferences, workshops, working with different groups of students in different contexts, participating in exchanges with other countries or schools, organizing seminars, etc.

- Working in difficult contexts should attract certain rewards which help to develop teachers' professional careers, professionalization and identities. Teacher education should prepare teachers for these contexts. Rewards must be linked to social recognition, teaching time, qualifications or facilities to choose another school after a certain period, the possibility to become a role model for other teachers in a ranking system, etc.

8.2.2. SECONDARY TEACHERS' INITIAL EDUCATION

The suggestions for Spain directly regarding secondary teachers' initial education must consider that Spanish secondary teachers have a strong identity forged during the undergraduate degree. The pre-existence of this identity must be taken into account in teachers' initial education programmes, as a way to ease the combination of both identities with productive results. In addition, two characteristics affect this section.

First, the Master's in secondary teachers' education is still new and is, in many universities, undergoing diverse modifications and adaptations. Second, recent legislation has reopened the possibility to return to the old 3+2 system and design some degrees at different levels. Therefore, this section aims to complement and propose some initiatives which could be positive in the implementation of the current Master's or if other studies tackling secondary teachers' education are established. Some proposals of improvement or to consider are as follows.

<u>Institutions and paths</u>

- Total time spent on pedagogy and subject pedagogy seems adequate and in concordance with international trends, but the organization as a 1-year Master's imposes several limitations on the Spanish programme. There are different alternatives to design more

flexible programmes, such as an undergraduate programme similar to the Chinese concurrent models in which students have four years to create a double identity and set up their knowledge (undergraduate programme with concentration in teaching), or the establishment of a 2-year Master's or an 18-month Master's in which a higher percentage of the time is spent immersed in real contexts, among others. These alternatives would provide more time for institutions to design their programmes and more time to students to develop a professional identity.

- In order to maintain quality standards, alternative paths must remain within higher education institutions. Hence, they should be combined at undergraduate or Master's level.

- It is necessary to open up alternative routes for both educative programmes and earning licences, not only for secondary school teachers' programmes but for teachers at every level. Nevertheless, alternative pathways must be carefully designed and assure that candidates acquire both pedagogical and subject knowledge, avoiding the intensification of the traditional war between these areas and looking for a harmonic integration.

- Abandon the eternal competition between pedagogy and subject knowledge and establish a modular and integrative system, where students and universities can combine classes and programmes towards a more wide-ranging knowledge in both areas.

- It would be beneficial to increase the relationship and collaboration among diverse faculties. Some universities are already designing multifaculty programmes, but they still represent a marginal percentage. Double degrees including a concentration in education must be conceived of as a collaboration project among faculties and departments, in which both undergraduate and Master's students benefit from the possibilities and knowledge of different faculties and their professionals.

- Different routes must aim to open the doors of the teaching profession to professionals from other fields, as well as to underrepresented groups. Therefore, in addition to alternative routes, programmes must be more flexible for students working in their 'first-choice profession' or who need to balance family and private life with educative

programmes. The final aim is to attract and ease the entrance into schools of high-level professionals, a benefit for all in the educative community.

- In the same way that schools can benefit from high-profile experts in sciences, humanities or arts, they can benefit from high-profile experts in pedagogy. Hence, it would be positive to rethink a programme for those who already have a teaching background but wish to acquire specific knowledge in a secondary education subject. The creation of these programmes would increase mobility among the different levels, ensuring that candidates have the specific knowledge.

Secondary teachers' curriculum design

- Giving the current model, in which student teachers already learn the speciality for four years, there is no need to deepen subject knowledge during the Master's, if not related to needs and applications in secondary education. It could be of benefit to avoid separation into enclosed blocks during this learning process.

- Due to the multicultural and heterogeneous character of the Spanish classes, it would be positive if the general framework of the Master's included classes with greater emphasis in teaching methods for diverse and intercultural contexts (which is noted in the order regulating the Master's but not specified in any of the analysed teacher education curricula).

- In addition, because of the dynamic and fast-changing character of modern societies and the extended used of ICT in education, programmes could explicitly include courses related to methodologies and strategies to work with ICT and foreign languages, and stress research, auto-evaluation methods and teachers' social role.

- In this sense, and since professional competencies are taking a principal role in designing teacher education, a reflective and practical proposal for plans without modules but around professional competencies could be more coherent with new educational tendencies.

- Certainly, the establishment of the Master's has represented great progress; still the period of the practicum is short and gives students few chances to really interact with different groups of students and learn from different teachers. In addition, there are no general guidelines to design the practicum, which leaves each university the freedom to plan their own experiences, with little national harmonization. The establishment of some basic requirements for the practicum, such as the type or the time to start it, could improve the programmes, always respecting universities' needs.

- Practicum harmonization could include different and varied types of practicum. The practicum should give future teachers the opportunity to meet different realities, work with and observe different teachers, directly teach and take care of a class under the supervision of a mentor and time and opportunity to reflect about their own practices.

- Since teachers are being prepared to work in both junior and senior secondary education, students should have the opportunity to practice in both levels, with students from different backgrounds, ages and characteristics.

- Time and opportunity to reflect about the practicum could be possible if classes and practices were planned simultaneously from the beginning of the plan.

- Schools and mentors should be carefully chosen according to quality standards. Guidance and time should be given to schools and mentors to clearly establish the objectives and responsibilities around the practicum. The intervention plan and time for tutors should be guaranteed, as a way to make the exchange rich for everyone and not just an extra weight for tutors.

- It is important not only to select good teachers and schools but to take into consideration their needs when sending students to any school. If the practicum is developed at the end of the year, tutors and schools are probably busy preparing for final evaluations, and working on content review more than teaching or programming.

  This period does not seem to be the most appropriate for either the student (who will take on a very small part of teachers' responsibility) or the teachers (who can feel overloaded with responsibilities during the last period of the year and the added

commitment to teach a student teacher). Therefore, a different distribution could be beneficial for all. For instance, practicums could be divided during different periods where secondary teachers and student teachers have time to get to know each other and to evolve together, teachers from secondary schools could get involve in university programmes and university teachers' in secondary schools' dynamics.

- There are neither general guidelines for the final dissertation, nor evaluation criteria. Offering some hints to guide this dissertation could help in planning the whole programme of the Master's, and establishing some stability among different universities.

Teachers' professional competencies

- The design based around competencies has been a great improvement compared with previous programmes. Indeed, similar designs could be implemented for undergraduate programmes for teachers at other levels, which would, in turn, ease the movement of teachers among different levels.

- Competencies should emphasize values and characteristics to develop teachers' identity after their initial education. Initial education as a comprehensive experience should have a professionalization effect, which in turn, teaches student teachers to become part of a professional group and work cooperatively.

- Teachers' own planning for future professional development should be encouraged, not only as a lifelong learning strategy but as a way to increase teachers' status, which will be linked to their rank and rewards. Teacher education should encourage the creation of a teacher whose practices are guided by reflection, analysis, research and constant updating of knowledge.

- It would be constructive to include explicit competencies regarding the social and civic dimensions of teachers' professional role. Teachers should feel part of a community so that the people from that community see teachers as active elements in the improvement of their social group, valued and highly estimated.

Secondary teachers' qualifications

- Master's level is adequate for supranational standards, but a year may not be enough to prepare teachers for both junior and senior secondary level. If the 1-year Master's keeps being the only route to secondary education, qualifications may include a concentration in one of the levels, even when not banning entrance to the other level. Optional classes can tackle work at the other level and be later deepened through professional development and in-service education, or further and longer practical education could improve the competencies for both stages.

  The goal is to progressively have teachers who can feel comfortable and be competent at both levels, but it is widely admitted that teachers' initial education cannot meet and keep up with all the innovation and knowledge in both pedagogy and subject specialization. Hence, finding an alternative inside the current legislation to consolidate teachers' basic profile and include the differences across levels would really set initial teacher education as the first step to articulating a lifelong career.

- If other qualifications become available, they should remain as university and official programmes approved and verified by quality agencies, at at least undergraduate level.

- In Spain, qualification does not take into account students' earlier experiences, which may be useful in the educative context. The inclusion and consideration of previous practices as part of certain qualifications may attract high-profile teachers who in turn benefit and increase professionalization and status. For instance, teachers who have a research background in important organizations or laboratories could rotate among schools to share their knowledge.

  This dynamic would, in turn, give these experts a higher social, economic and working consideration, and schools would have the opportunity to benefit from outstanding professionals. The diversification of qualifications (even through different kinds of ISCED 6 or ISCED 7 programmes) may be, like teachers' working status, an incentive for these professionals as well as a first step to enriching secondary schools.

Selection of teachers-to-be

- The selection process takes into account a fair level of foreign language and subject knowledge, but a few universities could still widen their selection to more direct evaluation and face-to-face selection. Universities could plan more comprehensive selection processes, since personal characteristics such as interpersonal competence, interest, motivation or vocation are rarely evaluated.

  It is understandable that this kind of evaluation is human resources- and time-consuming, therefore it could be organized with initial basic filters, such as academic results, and further interviews.

- Beside language and the undergraduate degree, some national framework could harmonize the selection process as a way to create a body of motivated and high-level teachers who respect and trust education and for whom education is not only a last choice for their careers. These dynamics would, in turn, create a pool of teachers with a strong identity.

- Restrictions in the selection process could improve teachers' status but must be done carefully, since it could have the reverse effect in a profession which currently does not enjoy high social appreciation. The first step is to increase the social perception and working conditions of teachers, then progressively expand the requirements for entering initial education, including the minimum mark from previous levels or previous experience.

8.3. POTENTIAL AND LIMITATIONS OF THE RESEARCH

Due to the nature of any social and educative research which is in addition being carried out in two completely different national contexts, this investigation had to confront certain limitations and compensate for them with strategies aiming to soften the impact of these limitations. In turn, the study tried to make the most of the opportunities inherent in investigating such dissimilar contexts, such as the numerous challenges and advantages of opening the mind and perspective to a different set of thoughts, attitudes, culture and understanding of the world and reality. Some of these limitations are common in comparative studies and others specific to this research.

The limitations were inherent in different components tackled in this investigation. First, embracing teacher education in a single study is not free of bias, since the topic is extensive and affected by multiple factors. This research tried to frame the study in only one step, initial education, and only one stage, secondary education, as a way to narrow down the immeasurable components influencing teacher education. Recommendations for future research would correct part of this partiality, including, for instance, professional or vocational secondary education or other levels of education, such as professional development.

Second, a common dilemma in comparative studies, according to Teichler (1996), is the design of a balance and symmetrical study, combining a fair distribution between theoretical and methodological knowledge and a wide range of components of the specific phenomena. The complexity of every social organization requires close attention to each national system, under a well-founded methodology. To tackle this common bias, the thesis includes an extensive chapter regarding theoretical knowledge and another on methodology, and later develops the description of 11 comparison categories, including 39 parameters and 168 indicators, including the guidelines of supranational documents.

This extensive display of indicators also addresses two other common flaws in comparative and inter-national studies: asymmetrical comparison due to researcher knowledge and because of restrictions and limitations in information access. To have an adequate knowledge of the 'other' unit of analysis, the researcher carried out a pre-thesis study on both countries, and selected the maximum and relevant indicators related to education and society, aiming to pay the same attention to both units of analysis and lower the asymmetry of the research.

According to Azarian (2011), most asymmetric comparative studies tend to simplify one of the cases and overuse secondary sources. In this case, the study describes both countries in the same extent and depth and refers principally to primary and official sources, and trusted and international secondary sources. The research was also developed through a symmetrical plan to avoid this bias, and all chapters and indicators are presented for both countries.

In this regard, Azarian (2011) also proposes solutions for asymmetrical studies, such as designing categories valid across various settings and using context-independent concepts. The study categorizes parameters existing in both countries, an indispensable characteristic

for detecting divergences and convergences, and rather than only looking for context-independent parameters, tries to combine context-independent and comprehensive and culture-related parameters, reaching the most comprehensive understanding possible of the educational phenomena under study.

Likewise, Azarian (2011) associates asymmetric studies with to pre-assumed conditions of autonomy of the units, ignoring complexity and mutual influences among the units, which often leads to researchers choosing comparative areas due to their availability. In this case, the units of analysis were deeply and thoroughly justified, attending to several factors, such as academic, cultural and economic features. Besides this, to mitigate these assumptions, and conscious of the influence of other units in both national contexts, the study developed a section tackling the relationship between both units of analysis, between each country and its continent and between each country and the world.

The third limitation is related to the great diversity found in Chinese universities due to the country's large area and internal organization. Student teachers' learning process and teaching practices showed great differences among provinces and universities, and information was not always available from remote places. In this matter, this study tried to found equilibrium between accessibly, relevance and relationship to the topic when choosing a set of national indicators to better understand the whole state of the country. As a result, parameters were modified, included or eliminated during the investigation, maintaining the essential comparability and relevance.

Analogous limitations were found to determine the formal components of teachers' initial education. In this case, the research tries to combine both national and international data, and focuses on specific areas: the most accessible city of mainland China, Shanghai, and a very accessible university for the researcher, East China Normal University. Both the city and the university on which this study placed more emphasis were also chosen for their relevance and excellence in the educative field.

The fourth limitation is related to cultural characteristics. Cultural differences were a concern from the beginning of the thesis work, since European and Asian culture are historically unlike, even opposite in certain features. Any educative context is a micro reflection of a wider culture and society, and any society reflects its values and priorities in its educative systems. Because of this unbreakable relationship, the chapter on the

educational framework includes social and cultural concepts, not only to understand each society but to appreciate its reflection in schools and educative systems.

One of the potentials of this comparative study, product of this richness and these differences, is the possibility to become "a gold mine for the early stages of conceptual restructuring" (Teichler, 1996, p. 431). This research is based on the idea that conceptual restructuring is dynamic and, as Teichler notes, "[comparative studies] are indispensable for understanding a reality shaped by common international trends, reforms based on comparative observation, growing trans-national activities and partial supra-national integration in higher education" (Teichler, 1996, p. 431)

However, to make the most of these opportunities, it has been positive and necessary to carry out in-place research. The limitations of such type of research refer to economic costs and personal, bureaucratic and academic efforts. The difficulties regarding funds were partially overcome by the CSC (China Scholarship Council) scholarship and personal savings of the researcher.

Other efforts and challenges have been confronted, such as language barriers, lack of previous in-depth information, and adaptation to live in another country, which have been progressively overcome with language classes, language and culture immersion, and personal research, trying to grasp the underlying meanings related to the study.

Besides these difficulties, other complications inherent to comparative studies regarding international contexts include the use of different languages or differences in statistical groupings. Some limitations derive from the use of different languages, which challenges the access to or organization of certain information.

This study includes information directly consulted in three languages, English, Spanish and Chinese (mainly for legislation) while other complements to the investigation (mainly for the theoretical framework) were read in French and Italian. Language equivalence is not always pure, a difficulty frequently addressed in comparative and international studies. Regarding this matter and aiming to ease this barrier, the researcher studied and practised the languages through the entire process of writing the thesis, used dictionaries and translators and, when in doubt, consulted national educative experts.

Similar limitations, an imperfection of equivalence, addressed the statistical organization carried out in each of the countries. This difficulty was overcome thanks to international data.

The fact that both countries belong to or participate in several international organizations and studies eased the access to national information, which in turn, complemented the countries' own statistics and helped to understand the situation of each country in the world. However, some of these data, such as the PISA results, should be understood with caution and under a critical perspective. The lack of context or the partialities of the assessment should be taken into account when trying to reach a more complex and comprehensive state of the question.

In this sense, as with most indicator-based research, this study did not try to follow a cause-effect approach but aimed to reach an analytical and practical approach, complemented with reflections and considerations of current models. However, tackling the methodology, one of the elements subject to improvement is the field research, which could be completed with focus groups, interviews with key informants or discussion groups.

Access to information was one of the major limitations of the study, since few books tackling this specific topic in languages other than Chinese could be found while residing in China. Foreign academic books on this matter are hardly found in China, and still, due to the specificity of the topic, no books or documents tackling this matter in these two countries was found, in China or elsewhere. The upgrade of information had to be done through Internet research, or ordering books from abroad, which had a high economic cost and delayed access to the books for one and a half to two months. This limitation was eased through organization of the research material while in Europe and using numerous online materials which could be downloaded in convenient digital formats.

From its beginning, this research has tried to overcome the natural and implicit limitations of a comparative study, and has taken into account these difficulties when choosing the topic, the indicators and the methodology. Hence it is possible to affirm that these limitations do not invalidate the results of this study or the proposals for improvements regarding secondary teachers' initial education in Spain.

8.4. RECOMMENDATIONS FOR FURTHER RESEARCH AGENDAS

This research is only a small piece in the growing trend and relevance taken by teacher education, secondary education, comparative education, supranational guidelines for education and national agendas on education.

Education's intrinsic dynamic is itself a justification to encourage other studies to keep track of changes in this area, tackling reforms and challenges from previous and modern reforms and policies. A deeper perspective including a historical comparison could also be beneficial for interpreting the progression of secondary teachers' initial education.

This proposal is also justified by the fact that both countries have recently carried on important reforms in their teacher education initial systems. In the future, it could be useful to analyse the outcomes of these new systems, assessing their strengths and weaknesses.

Besides this, it might be productive to encompass this study in a wider framework including similar studies deepening in both the horizontal (more territories) and vertical (more levels) contexts.

To grasp a more comprehensive state of the matter, it would be necessary to widen the study to other Asian and European countries. In this regard, one of the limitations expressed in the previous section regarding China's territorial extension could also be tackled in future studies, focusing on other provinces and universities. In turn, these further studies including other countries or a wider range in a large national context would ease Euro-Asian understanding and exchange.

In this sense, and owing to the high impact of globalization and supranational guidelines, a study deepening Euro-Asian exchanges for secondary teachers during their education could also contribute to improving the relationships between both countries and continents, to set up stronger connections at the early stages and promote academic and cultural exchanges on lower levels.

Besides broadening out to other territories, teacher education is itself an extensive and complex subject of study; hence it would be constructive to expand the studies to initial education for teachers at other levels, as well as for other stages in secondary teachers' education. Studying both induction and in-service education for young teachers would demonstrate the practical dilemmas arising right after initial education and could, in turn, be a guide for improving initial education. At the same time, reaching the perspective of teachers with expertise but dealing with new knowledge in their subjects can ease a real connection among all stages of teacher education.

Analysing for both China and Spain the period of induction as well as continuous lifelong education could offer a global view about teachers' whole careers. This study could serve as

an initial step to further understand and investigate teachers' professional development as well as the connections between the three stages in teachers' lives.

In a broader way, future research could look more in depth at how the latest reforms are understood and affect student teacher education, tackling relevant concepts such as identity, professionalization or professional competencies. These concepts, among others, could also be analysed according to each of the education levels, junior and senior secondary education. Studies that analyse the particularities and needs of teachers at each of the stages, could finally propose a set of tools and strategies appropriate for each level.

There are also specific components of secondary teachers' initial education that can be deepened in relationship to other countries or intra-nationally, for instance, examining and comparing the country's own mechanisms when there is no national harmonization, or the processes of external evaluation.

As detected in this study, the practicum module shows great differences and seems to be the class/subject with least harmonization in both countries. A detailed examination of this period, in the national and international field, could lead to the establishment of concrete policies and frameworks for designing the practicum, including guidelines on choosing schools and mentors.

Other studies could look for an affordable, fair and reliable way of designing the process of selection for both students' teachers and teachers in teachers' initial education programmes. Students' perception and disposition towards the profession and their preconceptions must be understood to further design and tackle the complexity of teachers' initial education.

The relationship between universities and schools could also be developed. It could be important to find and propose policies to institutional exchanges and collaborations, not only through practicums, but involving the whole community, especially secondary and university teachers.

Finally, and coherently confirming the importance of teachers in students' learning processes, a topic complementing this study could tackle teachers' profiles and requisites for entering secondary teachers' initial education programmes.

8.5. SUMMARY OF THE CHAPTER

This chapter compiles the conclusions of the thesis and develops the practical uses of the findings with proposals for Spain. It discusses its own contributions, potentials and limitations and offers some recommendations for further research in this field.

To summarize, secondary teachers' initial education in both countries shows more convergences than divergences in terms of planning these programmes in tertiary education and higher qualifications, raising the percentage of pedagogical credits, including a practicum and similar professional competencies. Still several divergences can contribute to improving, or at least reconsidering, each national system regarding pathways and flexibility, the existence of basic knowledge (foreign language, ICT, military training, culture and political thinking) and the possibility to widen or modify the selection of candidates for teachers' initial education programmes.

This chapter also concludes that teachers' initial education national policies generally follow, as well as promulgate, international trends in both countries, with higher agreement in China. Out of these conclusions, the proposals for Spain centre on higher compromise from all social agents, longer or combine degrees to develop stronger teachers' identities, reorganization of the classes of the Master's focusing on pedagogy and not subject knowledge, the organization of the courses around competencies and not separated modules, and flexibility for entrance to the courses, among others.

CONCLUSIONES

Este estudio pretendía detectar convergencias y divergencias en las corrientes nacionales e internacionales referidas a la formación inicial del profesorado. La formación del docente está inmersa en contextos nacionales y culturales concretos, producto de la historia de cada territorio. Estas realidades nacionales también se ven afectadas por una historia internacional, ya que "La importancia de los programas internacionales en las reformas educativas se sostiene en la capacidad de permitir que los reformadores escojan ideas eficaces e ineficaces de otras culturas, adoptarlas o abandonarlas, según sea necesario. Esto puede ser una gran ventaja para hacer reformas, ya que permite que los educadores chinos [y los occidentales] observen los pros y contras de otros modelos, sin experimentar directamente los inconvenientes de dicho modelo" (Powell, 2014, p. 17). Estas conclusiones pretenden delinear una visión transversal de la situación actual incluyendo no sólo la formación del profesorado sino un estado más amplio sobre la situación general de cada uno de los países, y ofrecer un uso práctico de los resultados del estudio.

En esta cuestión, el objetivo de las tesis era entender y analizar cómo China y España preparan a sus docentes de secundaria durante el primer paso hacia su carrera profesional y, detectar tendencias positivas e internacionales que pudiesen ayudar a diseñar una mejor formación inicial de docentes de secundaria adaptada a las circunstancias actuales y a las necesidades globales.

Las conclusiones se han organizado para confirmar o negar las tres hipótesis de investigación. Tal y como se explicaba en el capítulo de metodología, capítulo 2, las hipótesis se alcanzan a través de objetivos y preguntas de investigación. Este capítulo recopila y

organiza la información de toda la tesis para responder a las preguntas de investigación de cada una de las hipótesis de formas contextualizada.

HIPÓTESIS 1

Las ocho preguntas que cubren el primer objetivo general, "Comprender y describir, bajo un marco contextualizado, los principales elementos de los sistemas de formación inicial de los docentes de educación secundaria en dos países: China y España. Detectar y describir los estándares internacionales de calidad en relación con la formación del profesorado", son las siguientes:

1. ¿Cómo es, desde una perspectiva nacional, continental e internacional, el contexto nacional (características territoriales, sociales y económicas) en el que la formación del profesorado se lleva a cabo?

   Al considerar los resultados de la investigación relacionados con esta pregunta, es importante tener en cuenta el capítulo 3, para entender la progresión global de la formación de docentes en el mundo; el capítulo 4, al referirse a las características culturales nacionales, las diferencias culturales entre Europa y Asia, y la participación de los países en el contexto internacional, y el capítulo 6, donde se presenta la yuxtaposición de los datos generales de cada nación.

   Desde un punto de vista nacional, la formación del profesorado tiene lugar en dos países con claras divergencias culturales (véase tabla 6.14 y sección 4.3), así como divergencias territoriales, socio-políticas y económicas (véase tabla 6.2), pero cuya perspectiva, progresión y participación en el mundo están fuertemente influenciadas por la globalización y las agendas internacionales. De acuerdo con los resultados de la tabla 6.1, las divergencias evidentes se refieren a la ubicación, el tamaño del territorio, la población total, la población que vive en zonas rurales, la población que vive por debajo del umbral de la pobreza, la tasa de desempleo, la organización política y las filosofías nacionales. Las convergencias se encuentran en la diversidad cultural y religiosa dentro de cada país, en las historias nacionales recientes con una inicial falta de relaciones en el ámbito internacional y una posterior apertura y recuperación económica, y en la participación actual en las organizaciones internacionales (véanse secciones 4.1.1 a 4.1.3, y 4.2 .1 a 4.2.3). En este escenario, los docentes tienen que estar preparados para lidiar con su contexto nacional, así como con las confluencias, demandas y progresos internacionales.

La configuración de los sistemas educativos en China y en España está indudablemente influenciada por su diversidad cultural y su historia de la educación (véanse secciones 4.1.4, 4.1.5, 4.2.4 y 4.2.5), donde las culturas de Europa y Asia, las tendencias y los acuerdos guían de alguna forma las propuestas nacionales. Una de las razones principales para introducir este tipo de información es que los profesores tienen que estar preparados para lidiar con su propia sociedad como miembros activos y constructivos. En estos países, la noción de docente y la de estudiante es ligeramente diferente. Por un lado, los docentes chinos tienen que hacer frente a unos estudiantes altamente interesados en la educación, en parte, debido a la presión familiar y social y al significado y consecuencias que la educación tiene en su vida y en el entorno familiar (véanse secciones 4.1.5.6 y 4.2.5.6). La sociedad, las familias y los estudiantes esperan que los docentes respeten y promuevan los valores comunistas, así como la comprensión y práctica de la filosofía de Confucio (véanse secciones 4.1.5.1 y 4.2.5.1, y tabla 6.7). En este escenario, los esfuerzos de los estudiantes, así como el respeto hacia los profesores, son características intrínsecas a cualquier plan de educación, así como los exámenes son el objetivo principal y un hito que superar en cualquier institución de educación (ver tabla 6.3). Comúnmente, el hecho de contar con un gran número de estudiantes por clase (véase gráfico 6.2), así como la competitividad y la presión para obtener altos resultados académicos, hacen que los profesores continúen usando una pedagogía frontal para todos los estudiantes y en todas las áreas.

Por otro lado, los profesores españoles deben estar preparados para hacer frente a escenarios completamente diferentes. La motivación de los estudiantes no proviene de la presión social, sino del interés personal y la implicación de las familias. El entorno escolar cumple, al menos en los principios generales y oficiales, con los valores gubernamentales democráticos, los Derechos Humanos, los derechos del niño, igualdad, etc. (véase tabla 6.7). En este escenario, se espera que los docentes mantengan una relación fluida con sus estudiantes, que escuchen y satisfagan las necesidades individuales de cada alumno, y que adapten sus prácticas a varios niveles. Los profesores tienen que ajustar su metodología al colegio, al grupo y a los estudiantes. El hecho de que la valoración social de los profesores no sea tan alta como en China (ver tabla 6.12) y las diferencias de intereses y niveles de los estudiantes, a menudo conduce a situaciones en las que los docentes deben gestionar aulas complejas. No sólo la falta de estatus, pero el alto nivel de diversidad, especialmente en las escuelas públicas, requiere profesores que desarrollen pedagogías inclusivas y flexibles, donde el esfuerzo no viene exclusivamente

del estudiante. Se espera que el trabajo se comparta entre los docentes, los colegios, los docentes de apoyo, los servicios sociales, las familias y el estudiante.

La formación inicial del profesorado tiene que cumplir con estos requisitos sociales, por lo tanto, los sistemas tienen que adaptar sus estructuras y contenidos a sus propias realidades. Sin embargo, desde un punto de vista continental e internacional, las diferencias no son tan evidentes. Siguiendo la tendencia de la globalización económica y la codependencia nacional, los dos continentes, Asia y Europa, están emprendiendo caminos similares en materia de educación. De acuerdo con la información que se muestra en las secciones 4.1.2 y 4.2.2, aunque el camino que ha recorrido la Unión Europea en materia de educación y las relaciones entre los países del continente están más consolidadas, (gracias a la Unión Europea y, en este caso, al Espacio Europeo de Educación Superior), China también está generando fuertes lazos con otros países asiáticos (sobre todo con Corea y Japón). En este sentido, ambos países pueden categorizar sus sistemas de acuerdo a las clasificaciones internacionales (CINE), que se ajustan perfectamente a la división interna de sus sistemas, y ambos están inmersos en un proceso constante de profesionalización de la carrera docente mientras participan en organizaciones internacionales.

Una de las convergencias entre China y España, en cuanto a la perspectiva continental, es su alta relevancia dentro de su propio continente. Ambos países son uno de los más grandes y más poblados de su continente y están involucrados en numerosos intercambios económicos, políticos y educativos (véanse secciones 4.1.4 y 4.2.4). España participa en las operaciones e intercambios como miembro de la Unión Europea. Esta organización supranacional incluye derechos y responsabilidades con respecto a varias áreas, tales como el libre comercio, la justicia, la agricultura, etc. Por su parte, China y los países asiáticos, no pertenecen a ninguna organización en la que se inste a los países a ceder sus poderes nacionales a organizaciones supranacionales, sin embargo, trabajan mediante tratados y acuerdos. Ejemplos de ello es la zona de libre comercio China-Japón-Corea o la participación de estos tres países en ASEAN + 3.

La participación de ambos países es también notable a nivel internacional, y las diferencias territoriales, sociales y económicas se disipan ligeramente al aumentar el nivel de análisis. Ambos países pertenecen a varias organizaciones internacionales, como las Naciones Unidas y la UNESCO (véanse secciones 4.1.2 y 4.2.2). La sólida presencia de

China, después de su apertura al ámbito internacional, y la participación de España, desde su inclusión en la Unión Europea, han provocado cambios educativos en ambas naciones. Varias políticas educativas de organizaciones internacionales y supranacionales han trascendido a los contextos nacionales, y la participación china y española en el campo de la educación internacional se ha incrementado.

2. ¿Cuáles son las últimas tendencias educativas, con impacto en la formación del profesorado, en cada uno de estos continentes y en los dos países seleccionados? ¿Cómo están participando estos continentes y países en iniciativas más amplias y que incluyen la formación del profesorado?

Como se ha mostrado en las secciones 4.1.4 y 4.2.4, en términos generales, las tendencias educativas de los continentes muestran principalmente divergencias entre Asia y Europa. En Asia, siendo un gran continente y el más poblado del mundo, es posible encontrar países con ritmos desiguales de desarrollo. Varios países asiáticos están actualmente tratando con altas tasas de matriculación, pero con escasos recursos, con un aumento de la ratio de alumnos por profesor, con marcadas brechas económicas dentro de cada sociedad o con profesionales de mala calidad, entre otros (véase sección 4.1.4). Sin embargo, al seleccionar los países de Asia oriental, la zona donde se coloca China, las tendencias tienden a ser similares a las de Europa.

Los países del Este de Asia, principalmente China, Japón y Corea, comparten con Europa la tendencia de promover estrategias de aprendizaje permanente, con el objetivo de definir y cumplir con cierto nivel de calidad en la educación, el establecimiento de normas nacionales, el uso de las TIC, cambios en los procesos de evaluación, y la intención de promover la calidad de los docentes. Estas tendencias se complementan en Europa por el objetivo que se ha marcado la Unión Europea para acercar a todos los ciudadanos de los Estados Miembros, lo que conlleva promover el uso de las lenguas europeas, la movilidad de profesores y estudiantes y equiparación de cualificaciones (véanse secciones 4.1.4 y 4.2.4). También en Asia se están centrando en esta cuestión, promoviendo el intercambio de estudiantes entre los países asiáticos, sin embargo, estas dinámicas están aún menos armonizadas que en Europa. Cada uno de estos fundamentos se refleja más tarde en las políticas de formación del profesorado en ambos países, como un paso necesario para mejorar la formación del profesorado acorde a estándares internacionales.

Por un lado, tal como se explica en la sección 4.2.4, Europa ha creado el Espacio Europeo de Educación Superior en el que todos los países diseñan sus títulos universitarios utilizando créditos europeos (ECTS) y la estructura de las universidades se divide en tres niveles: primer ciclo (180 a 240 ECTS), segundo ciclo (90 a 120 ECTS) y tercer ciclo (doctorados donde por lo general los créditos no son necesarios). Los créditos tienen cargas de trabajo similares y los cursos tienen un número similar de créditos. Además de esto, las normas de calidad se revisan periódicamente y se establecen reuniones de seguimiento. En este contexto, la formación de los profesores se desarrolla en sistemas semejantes y el intercambio académico es frecuente, es por ello que existen signos evidentes de tendencias internacionales.

Por otro lado, tal como se describe en la sección 4.1.4, los países de Asia oriental están apoyando el intercambio de estudiantes y la cooperación en materia de educación a través de programas específicos como CAMPUS Asia, la Cumbre Trilateral Japón, China y Corea del Sur de Cooperación Trilateral VISIÓN 2020 o el Plan de Acción de ASEAN + 3 para la educación: 2010-2017. Las similitudes entre las iniciativas europeas y los planes asiáticos se encuentran al analizar las unidades de los planes de educación. Varios programas de Asia toman como referencia los créditos europeos ECTS, aunque Asia tiene actualmente varios sistemas de créditos o esquemas de transferencia, tales como los ACTS, ACTFA o UCTS (este sistema es equivalente a los europeos ECTS, donde un año corresponde a 60 créditos). De nuevo, esto es un signo de la globalización de la educación.

Todos los planes de Europa y Asia se dirigen a la armonización de sus sistemas de educación superior, que tiene, a su vez, un impacto en la formación del profesorado. Así, los estudiantes pueden experimentar los sistemas de enseñanza en otros países y además tienen la posibilidad de obtener un título extranjero. En este escenario, los Estados han puesto en marcha iniciativas más comprehensivas, en las que tienen que acordar y compartir sus líneas de educación con otros países, adaptar sus programas y reconocer los planes de otros países bajo percepciones similares de calidad. Una vez más, estas dinámicas muestran la relevancia de las organizaciones y las relaciones internacionales, inter-nacionales y supranacionales y cómo los acuerdos trascienden más tarde a las realidades nacionales.

Como se indica en la pregunta anterior, una convergencia clara es la apertura de China y España hacia los intercambios económicos, políticos y educativos que en la actualidad se están promoviendo en todo el mundo. Como se ha descrito, los intercambios europeos y asiáticos están altamente promovidos dentro de su propio continente, sin embargo, los intercambios entre Europa y Asia son todavía escasos.

Si nos centramos en el nivel nacional, las tendencias de educación con respecto a la formación del profesorado se abordan en las secciones 5.1.1 y 5.2.1, bajo el título de perspectiva histórica. Los cambios en la formación del profesorado se han relacionado con las nuevas perspectivas de la educación: en China a menudo procedentes de modelos extranjeros (ruso, japonés y americano principalmente) y en España como consecuencia de los desacuerdos políticos internos. En el siglo pasado, los dos países han reformado los sistemas educativos de sus profesores en varias ocasiones. Sin embargo, una divergencia notable en la historia de estos dos países ha tenido una fuerte influencia en los sistemas actuales. Los sistemas de formación de docentes chinos han sido tradicionalmente diseñados en modelos concurrentes mientras la vía más común en España ha sido siempre el modelo consecutivo, de ahí, algunas de las dificultades actuales en la modificación del modelo vigente.

3. ¿Cuáles son las agendas continentales (asiáticas y europeas) que focalizan en mejorar la formación del profesorado?

De acuerdo con el plan de la tesis, las secciones 4.1.4 y 4.2.4 abordan las futuras directrices sobre la formación del profesorado de cada continente, Asia y Europa. Como se ha explicado en el marco teórico, los países están conectados inevitablemente por la globalización, así las propuestas internacionales y supranacionales son probablemente reflejadas en los escenarios nacionales. En este caso, la pregunta hace referencia a los escenarios continentales, ya que son las realidades más cercanas a cada país, y debido al hecho de que China tiene fuertes lazos de educación con otros países asiáticos, principalmente con naciones de Asia oriental (como se explica en la sección sobre la armonización en la educación superior en Asia, 4.1.4), y España está fuertemente influenciada por la Unión Europea, organización supranacional (explicado en la sección sobre el EEES, 4.2.4).

Esta cuestión complementa las dos primeras preguntas de investigación. Las preguntas 1 y 2 cubren las incógnitas sobre cómo son actualmente cada una de las

naciones y cómo es su sistema educativo, analizándolos desde perspectivas internacionales, continentales y nacionales, y cuáles son las características que afectan a la formación del profesorado y a la predisposición de las sociedades hacia los profesores. Estas dos preguntas se incluyeron para entender mejor el presente, mientras que la pregunta 3 tiene como objetivo comprender la dirección futura de cada país de acuerdo con las tendencias continentales.

Las directrices de Asia y Europa concuerdan en la necesidad de reducir la tendencia actual de las instituciones de formación de docentes que conlleva exigir estándares de selección bajos, que provocan, a su vez, una disminución del estatus y del atractivo de la profesión. En esta cuestión, tanto Asia como Europa están tratando de aumentar el atractivo de la carrera. Sin embargo, las realidades de estos dos países están marcadas y diferenciadas por dos hechos: (1) la gran población y la falta de plazas universitarias para cubrir la demanda de estudiantes en los países asiáticos frente a la pequeña población y la amplia oferta académica en los países europeos (ver tablas 6.1 y 7.13, y secciones 4.1.5.6 y 4.2.5.6); y, (2) la diferencia de estatus social del que disfrutan los docentes en estas dos sociedades (ver tabla 6.12).

En este escenario, los países están obligados a encontrar soluciones diferentes para promover el atractivo de la enseñanza. Cierta seguridad económica y pagas extras o complementos salariales se ofrecen en la mayoría de las sociedades, mientras que la existencia de prestaciones sociales se encuentra principalmente en Asia. Otra divergencia es la existencia de un sistema meritocrático instituido en las sociedades asiáticas, donde los docentes también son evaluados y situados en un ranking, en función de su experiencia y logros de sus alumnos. Sin embargo, tratar de instaurar este tipo de sistema en Europa podría tener las consecuencias opuestas. Al tener los docentes un estatus relativamente bajo, los candidatos podrían sentirse desanimados a entrar en una profesión repentinamente competitiva con pequeñas recompensas sociales o económicas (para ejemplos nacionales véase tabla 6.10 y gráficos 6.7 y 6.8).

Como se explica en estas secciones (4.1.4 y 4.2.4), además del estatus y la selección de los docentes, los dos continentes promueven la inclusión de los estudiantes, el respeto a las diferencias y la adaptación de los docentes a las capacidades y necesidades de sus alumnos. Sin embargo, los términos de integración e inclusión incluyen diferencias cuando se analizan profundamente. La adición de nuevos términos que hacen referencia

a los derechos de los niños y la educación inclusiva se debe a una progresiva transformación de la mentalidad y la comprensión de las dificultades educativas y la diversidad en las sociedades, así como a los movimientos migratorios y la aparición del concepto de multiculturalismo en cada sociedad como resultado de la globalización. En este sentido, las directrices de formación del profesorado se centran en las competencias de los profesores para adaptar sus clases, comprender a sus estudiantes y gestionar grupos multiculturales y con alumnos de diversas capacidades.

Estos son sólo algunos de los propósitos que respaldan la creación y establecimiento de un marco de competencias, tanto en las iniciativas de Asia como en las de Europa, y que también se refieren al uso de estrategias de aprendizaje permanente y de las TIC. Los planes de ambos continentes también están tratando de encontrar un mejor equilibrio entre la educación, la investigación, la innovación, y entre las competencias pedagógicas, el conocimiento de la materia y de las didácticas de cada área. El peso de las organizaciones internacionales y el hecho de que todos los países están de alguna manera involucrados en el ámbito internacional es patente en las numerosas convergencias entre las agendas de Asia y Europa. No obstante, algunas diferencias persisten.

Por un lado, las directrices asiáticas se centran ahora en la remodelación del papel de los docentes para prepararlos bajo una estructura menos jerárquica y enfoques más comprehensivos. Las principales declaraciones en las sociedades asiáticas giran en torno a las diferencias entre los países asiáticos y occidentales, y a las diferencias de conceptualización sobre la noción de formación del profesorado, sobre el concepto de profesor y de la educación en sí misma. Estas nociones están, en Asia, fuertemente influenciadas por el confucianismo y tienen diferencias importantes en comparación con los conceptos occidentales (explicado en sección 4.3.1).

Expertos asiáticos exigen que el modelo anglosajón no sea tomado como el único paradigma normal o efectivo. También hacen hincapié en que las normas de evaluación tienen que hacer frente a esta diferencia conceptual. Además de esto, las instituciones asiáticas están buscando estrategias para encontrar canales fluidos de coordinación entre las universidades y las administraciones, y, para administrar el contraste entre la libertad académica y el control gubernamental de calidad. Otro de los objetivos de la agenda asiática es desarrollar un mejor plan para compartir competencias entre diferentes tipos

de instituciones responsables de la formación del profesorado, como las universidades comprehensivas y las universidades normales o exclusivas de educación.

Por otra parte, las directrices europeas se están centrando en la identificación de las habilidades que necesitan los profesores para hacer frente a la transformación de su papel en la sociedad del conocimiento. Las principales preocupaciones en Europa pertenecen a la necesidad de aumentar el número de docentes en ciertas materias, como las matemáticas, la ciencia, la tecnología y las lenguas. Europa tiene como objetivo abrir la profesión a perfiles más amplios, tratando de atraer a expertos de otros campos, así como tener suficientes candidatos en todas las especialidades y niveles. El programa europeo hace hincapié en la movilidad y la asociación entre instituciones, y por lo tanto en la promoción de experiencias de aprendizaje en el extranjero, así como de prácticas democráticas y reflexivas (véase sección 4.2.4).

Todas estas intenciones tienen que ser adaptadas para ajustarse a las estructuras nacionales. Tener en cuenta los efectos de entidades internacionales, continentales y nacionales es esencial para comprender la profundidad del tema de investigación. Aun así, un nivel más bajo y cercano a la realidad debe ser abordado: la estructura académica específica en la que se espera que los docentes desarrollen su futuro laboral.

4. ¿Cómo es, en términos de legislación, inversión, futuras directrices y estructura, el sistema general de educación de cada uno de estos países?

La información y las fuentes necesarias para responder a esta pregunta de investigación se explican en las secciones 4.1.5 y 4.2.5, y en el capítulo 6 donde se desarrolla la yuxtaposición y la comparación de las características generales del sistema educativo. La legislación de la educación, en ambos países, trabaja los valores de respeto e igualdad y garantiza la educación independientemente de la situación y las características personales, etc. Hay, sin embargo, dos diferencias importantes, una relacionada con la organización de las leyes y la otra con los principios subyacentes (véanse cuadros 6.6 y 6.7).

Por un lado, la legislación china es muy específica y detallada, mientras que la española es más amplia y genérica. La prueba de esta diferencia radica en el hecho de que China tiene tres leyes nacionales (además de la Constitución) que regulan los componentes elegidos en esta tesis, llamadas la Ley de Educación Obligatoria, la Ley de Educación, y la Ley del Profesorado. En este sentido, España tiene sólo una ley (además

de la Constitución), la Ley Orgánica de Educación, que incluye artículos relativos a todas estas cuestiones. Ambos países han desarrollado más tarde su legislación a través de órdenes o notificaciones.

Por otro lado, los valores que subyacen a la legislación sobre la educación son claramente diversos. China subraya los valores comunistas y socialistas, bajo la guía de las filosofías marxistas-leninistas y los valores expresados por Mao Zedong. Estos valores se reiteran en toda la legislación y los programas oficiales. La legislación también reafirma la importancia de tener altos ideales morales, virtudes cívicas, amor por la patria, por el pueblo y por el trabajo, la ciencia, el socialismo, el patriotismo, etc. Por el contrario, los valores españoles pertenecen a una organización democrática que hace hincapié en el respeto los derechos fundamentales y la libertad personal, la igualdad de género, la no discriminación y la justicia (ver tablas 6.6 y 6.7 y secciones 4.1.5 y 4.2.5).

Cada sistema educativo tiene sus propias características que reflejan el carácter de sus sociedades, y las políticas y tendencias en educación. En términos generales, y en relación con su bagaje cultural, los sistemas educativos español y chino muestran tanto convergencias como divergencias. Como se ha descrito (véase cuadro 6.6), numerosas diferencias tienen su origen en la organización nacional, respecto a las leyes y prioridades, como el hecho de que el sistema educativo chino disfrute de una cierta estabilidad gracias a las leyes generales y un fuerte grupo de instituciones públicas, pero cuyas políticas restringen la intervención regional y local a través de una organización altamente centralizada. Este control gubernamental también se refleja en la existencia de un departamento nacional específico que examina y aprueba todos los materiales escolares. Por otro lado, el sistema español está determinado por la confrontación política y la inestabilidad de acuerdo a los cambios gubernamentales. Este hecho se suavizada de alguna manera mediante un sistema descentralizado, que en teoría debería dar más autonomía a las comunidades autónomas y los centros educativos, lo que de hecho se ha traducido, por ejemplo, en un rápido crecimiento de instituciones privadas en algunas regiones.

Analizando estas diferencias más detalladamente, surgen algunas similitudes, como el hecho de que a pesar de la organización teórica, la autonomía de los centros está en ambos países, en su mayoría, relacionada con la organización pedagógica más que con las acciones administrativas, y los centros desarrollan sus propios programas tras otros

dos niveles del desarrollo curricular (nacional y regional), y que actualmente las instituciones públicas y privadas están permitidas en ambos territorios (véase tabla 6.5). Independientemente de la disparidad en el número de instituciones públicas y privadas de cada nación (véanse gráficos 6.9 a 6.12), ambos países invierten un porcentaje similar de su PIB en educación (véase gráfico 6.3), que es, según datos del Banco Mundial a partir de 2012, más baja que la mayoría de los países con altos resultados académicos. [82]

Con respecto a las futuras directrices, ambos países han establecido objetivos a alcanzar en el año 2020 (véanse secciones 4.1.5.2 y 4.2.5.2), como el de aumentar los graduados de los centros de educación secundaria y superior, que la educación de la primera infancia sea universal o casi universal, aumentar la población que asiste a la educación superior para alcanzar al menos el 40% y la promoción de estándares de aprendizaje y de calidad para toda la vida. Ambos países esperan diseñar una mejor transición entre la educación y el empleo, seguir ofreciendo una educación igual para todos y promover el intercambio académico.

A pesar de estas convergencias, ciertos desafíos han surgido en China al abordar la consolidación de la educación obligatoria de 9 años, como la necesidad de eliminar el analfabetismo, de disminuir la brecha en educación entre las zonas urbanas y rurales, mejorar la educación de los hijos de trabajadores migrantes, o elevar el número promedio de años de educación. Además, al igual que con la legislación, las futuras directrices ponen de manifiesto la necesidad de mejorar la conciencia ideológica y conducta moral, para respaldar la educación moderna con características chinas, así como la salud física. La salud física es muy relevante en China, donde la educación física se considera esencial para el cuerpo y la mente. Esta afirmación se confirma al estudiar el plan de estudios de educación secundaria (véase sección 4.1.5.4).

La mayor parte de estos objetivos ya se han cumplido en el país europeo, como se ve en el hecho de que España ya ha alcanzado tasas plenas en educación obligatoria y los años esperados de instrucción alcanza los 17.1 (véase gráfico 6.1). Por el contrario, las futuras directrices en España se centran en algunos de los hitos que han sido ya alcanzados, o casi alcanzados, en China. Este es el caso del objetivo de mejorar las

[82] Finlandia (7.2%), Noruega (6.6%), Vietnam (6.3%), Holanda y Francia (5.5%), Suiza (5%), Canada (5.3%), Estonia (5.1%). El PIB invertido en educación en China y España es similar al de Corea (4.6%), y más alto que en algunos países con buenos resultados académicos como Japón (3.8%) y Singapur (3.1%).

competencias básicas de los estudiantes en lectura, matemáticas y ciencias (véase gráfico 6.14). Dado que los estudiantes chinos tienen los mejores resultados académicos del mundo, este objetivo no está incluido en las directrices chinas. En España, otros propósitos apuntan a reducir abandonos prematuros de la educación, el aprendizaje de lenguas extranjeras y los períodos de estudio en otros países.

Para responder plenamente a esta pregunta, es necesario describir los sistemas generales de la educación en la que los docentes deben desarrollar sus futuras carreras. Las estructuras generales del sistema educativo se describen en las secciones 4.1.5.3 y 4.2.5.3, y se comparan en la sección 6.2.1. Como se ve en la yuxtaposición (tabla 6.3, figura 6.1), las estructuras generales del sistema educativo muestran principalmente convergencias: la organización de la educación en cinco etapas, de las cuales CINE 1 y 2 son obligatorias y gratuitas. Hay dos divergencias principales, (1) la estructura interna es más flexible en China, con dos divisiones de la enseñanza obligatoria (5 + 4 o 6 + 3), mientras que España sólo tiene una combinación posible (6 + 4), y (2) la educación obligatoria es un año más larga en España, 10 años, que la de China, 9 años.

5. ¿Cómo está concebida la educación secundaria en cada uno de estos países en términos de estructura, currículo, horarios, recursos humanos, instituciones, condiciones laborales de los docentes, y roles de docentes, familiares y alumnos?

Los datos para responder a esta pregunta se encuentran en las secciones 4.1.5.4 a 4.1.5.6 para China y 4.2.5.4 a 4.2.5.6 para España, así como en el capítulo 6 donde se aborda la yuxtaposición de características generales. Esta es la última pregunta acerca de las características generales (que se han organizado desde el nivel más alejado al más cercano al tema central de la tesis, partiendo desde las perspectivas internacionales, supranacionales y nacionales, para pasar a la legislación nacional de educación, y finalmente llegar a la educación secundaria). Además, esta organización reúne los elementos incluidos en el marco de calidad propuesto por la UNESCO, que se muestra en la sección 3.4 (figura 3.3), y la estructura de la tesis acorde a este marco que se muestra en la sección 2.4.1 de la metodología (figura 2.2).

Aunque la educación secundaria general muestra algunas convergencias, en este nivel resaltan las divergencias, sobre todo en la etapa de la educación secundaria superior. Las tres características que se destacan en este contexto son: la concepción general, la orientación y la estructura. La estructura de la educación secundaria converge en algunos

aspectos como la existencia de una etapa obligatoria (junior o inferior) y niveles no obligatorios (senior o superior) y, en que la enseñanza secundaria se finaliza a los 18 años (véase la figura 6.1). Las divergencias se encuentran en la organización interna, mientras que China tiene dos estructuras internas para la educación secundaria (3 + 3 o 4 + 3), España tiene sólo una (4 + 2), y en la orientación.

En China, el final de nivel obligatorio se establece a los 15 años y en España a los 16 años. Después de terminar la enseñanza secundaria, los estudiantes pueden, en ambos países, entrar al mercado laboral, un año antes en China que en España. Esta diferencia hace que los estudiantes españoles terminen un año más tarde los estudios obligatorios, lo que, sumado a otras razones como las posibilidades económicas o necesidades de las familias, hacen que el total de años estudiados y el acceso a la educación secundaria superior sea más largo y común para los estudiantes españoles que para los chinos, produciendo diferencias en las tasas de matriculación (ver tabla 6.4). Este elemento es también una cuestión de debate en España, donde algunas tendencias han propuesto la extensión de la educación obligatoria hasta los 18 años. Esta modificación implicaría la necesidad de replantear la formación docente bajo nuevas perspectivas y competencias.

El concepto chino sobre la educación superior general se enfoca claramente a entrar en las mejores universidades, por lo que los estudiantes soportan durante esos tres años una gran presión tanto de sus profesores como de sus familias. Además de esto, el contenido tiene una fuerte orientación moral, social y política englobado en una única vía para todos los estudiantes, que se combina con una sólida orientación dirigida a superar los exámenes. La modificación de este tipo de dinámicas educativas tiene varias limitaciones, tales como la necesidad de planificar un proceso de selección justo y asumible en recursos, cubrir las exigencias de las familias y lidiar con un sistema de educación tradicional fuertemente basado en el confucianismo y el mérito.

Por el contrario, en España, la educación secundaria superior general se configura como una ruta común en la educación de los estudiantes y la mayoría de los alumnos deciden elegir el camino general antes que la formación profesional. Una de las razones para elegir directamente la ruta estándar es que los programas de formación profesional han gozado históricamente de menos prestigio que los títulos universitarios. Aun así, la educación secundaria superior se divide en diferentes vías en función de los intereses de

los estudiantes (ver tabla 6.7); la presión no es tan alta como en China y los contenidos se centran principalmente en el examen final del último año.

Este período ha recibido algunas críticas por tener una duración de tan sólo dos años, con el argumento de que los estudiantes de primer año tienen que adaptarse desde un nivel obligatorio, presumiblemente con menos exigencias, a un nivel post-obligatorio, dejando sólo un año para preparar el examen de ingreso a la universidad. Así, el tiempo para abordar el plan de estudios y adquirir el conocimiento, y las estrategias para superar la evaluación de acceso a la universidad, parecen escasos.

Teniendo en cuenta la naturaleza de la educación secundaria en cada país, las divergencias del plan de estudios son coherentes con los estándares y las expectativas nacionales. Los planes de estudios se enmarcan en las filosofías y los valores nacionales ya mencionados, y las áreas y las clases se organizan a lo largo del sistema nacional centralizado o descentralizado. Como se muestra en el gráfico 6.5, en China, las clases optativas sólo se toman en la educación secundaria superior y su porcentaje es bajo, mientras que los estudiantes españoles tienen la posibilidad de elegir clases optativas desde el primer ciclo de secundaria, y el porcentaje puede llegar, en la educación secundaria superior, a ser la mitad de su plan. Esta característica es también un signo de la homogeneización de la educación en China, donde el Gobierno mantiene un estricto control de la educación, los estándares y contenidos de calidad.

En referencia al plan de estudios, algunos temas merecen ser mencionados como una clara divergencia entre China y España, y como un signo de los antecedentes culturales de cada país. Hay, en la educación china, pero no en el plan español, áreas dedicadas a competencias laborales, el pensamiento moral y político, y a las prácticas sociales y en la comunidad (véanse secciones 4.1.5.1 y 4.2.5.1). Además, confirmando la importancia que China le da a la educación física, los estudiantes chinos tienen ejercicios de ojos todos los días y los créditos para las clases de educación física casi están a la par, en el primer ciclo de secundaria, e incluso superan en la educación secundaria superior, a los créditos de lengua china, las matemáticas o lenguas extranjeras. Este elemento es tan relevante para los chinos que algunos centros educativos incluso tienen una concentración en ciertos deportes, dedicando varias horas al día para el cultivo de los deportes desde el principio de la educación formal.

De acuerdo con los datos presentados en la tabla 6.4, la cantidad de clases disminuye en ambos países con el avance en el nivel académico; sin embargo, el tiempo que los estudiantes pasan en la escuela sólo aumenta en China, de 35 a 40 semanas (ver tabla 6.8). El estrés para los estudiantes chinos en este periodo es muy intenso, ya que todo su futuro se decide al final de este nivel, por ello tienen más semanas de clases y dedican más tiempo a realizar trabajos en casa (véase gráfico 6.6) que los estudiantes españoles. Aunque las autoridades chinas han probado varias veces a disminuir el peso de las evaluaciones, los procesos de selección continúan basándose principalmente en las notas finales, de ahí la necesidad de los estudiantes de invertir mucho tiempo en la formación académica.

Sin embargo, los alumnos no son los únicos que sienten la presión en el sistema de educación chino. Teniendo en cuenta la población de China, sus altas tasas de matriculación en la enseñanza secundaria inferior y superior y las plazas universitarias limitadas, especialmente en las principales universidades, los profesores se ven obligados a obtener los mejores resultados académicos de sus estudiantes, lidiando regularmente con ratios alumnos-profesor más altos que los españoles (véanse gráficos 6.10 y 6.11). Esta es una de las razones, junto con los antecedentes culturales, la falta de recursos en algunas escuelas y la alta competitividad, para que los profesores mantengan en China una pedagogía frontal.

No sólo las relaciones alumno-docente divergen entre estas dos naciones, pues también el tipo de institución en la que estudian y en la que, por lo tanto, los docentes trabajan, también divergen. Como se ha explicado anteriormente, la comercialización de la educación ha llegado a todos los países, pero el crecimiento de los centros educativos privados y concertados es muy claro en España (véanse gráficos 6.10-6.13). China, por el contrario, como se reitera en sus documentos legales y valores, mantiene una gran mayoría de centros públicos y todos los centros están bajo la supervisión del Estado, lo que permite que pocas iniciativas privadas se lleven a cabo.

En cuanto a las condiciones de los docentes, una de las divergencias entre China y España es la gestión de los salarios, que se muestra en la tabla 6.10 y en el gráfico 6.7. China establece el salario de sus profesores acorde al de los funcionarios públicos y son administrados por las regiones, mientras que España da a los profesores la condición de funcionarios públicos, y sus salarios son gestionados por las comunidades autónomas.

Una consideración a tomar con respecto a estos dos tipos de estatus es que los salarios son muy homogéneos para todos los docentes en España, pero tienen una alta disparidad en China. Las disparidades entre las regiones en China no es sólo una cuestión relativa a los salarios, sino que se extiende a casi cualquier otra materia educativa, como a la ratio alumnos-profesor o a las tasas de abandono (véase yuxtaposición de parámetro 3). Además, esta brecha entre las zonas rurales y urbanas es conocida y está ya siendo abordada por las autoridades chinas (véase legislación, 4.1.5.1, y planes futuros 4.1.5.2).

Sobre el tema de los salarios, tanto los docentes chinos como los españoles tienen un salario promedio (en China dependiendo de la región), que se complementa con bonos o extras que incluyen pagos. En China estos extras incluyen uno según el rendimiento de los estudiantes, que no se incluye en España (véase tabla 6.10). Este tipo de bono se está considerando actualmente en España, bajo una perspectiva muy crítica, ya que los docentes que trabajan en contextos difíciles podrían percibirlo como un castigo más que un estímulo, y se tiene en cuenta que varios factores afectan los logros de los niños, como la participación de la familia, los recursos, la intervención de otros docentes, etc. Además, se considera a menudo que este tipo de bono choca abiertamente con la naturaleza de la educación, que no sólo puede centrarse en los logros académicos sin tener en cuenta el desarrollo personal y global del alumno.

Las últimas divergencias en las condiciones de trabajo hacen referencia a los tiempos de enseñanza y en el aula (véase gráfico 6.8). Los profesores españoles tienen menos tiempo para preparar las clases, ya que sus horas de trabajo son supuestamente dos horas menos que las de los docentes chinos, y además tienen que estar en el aula y enseñar siete horas y media más. Se espera que los docentes chinos pasen más horas en los centros, pero no dentro del aula. Esta divergencia puede entenderse bajo varios puntos de vista. Por ejemplo, podría significar que la legislación china es más consciente de la necesidad que tienen los profesores para preparar clases de calidad, mientras que los profesores españoles deben cumplir con todas las exigencias del trabajo y emplear más tiempo fuera del horario oficial de trabajo, o que la carga de trabajo chino y tareas administrativas son extremadamente exigentes debido a la alta cantidad de estudiantes. Independientemente de las razones, el tiempo real de trabajo de los profesores es difícil de medir, puesto que el tiempo adicional o "tiempo invisible" no se registra oficialmente en ninguna de estas realidades.

El último elemento, la percepción social hacia el trabajo y el estatus de los profesores se refleja en las iniciativas administrativas (ver tablas 6.10 y 6.14). En este asunto, surgen convergencias en materia de intenciones políticas, situando a los docentes como una clave esencial para el éxito académico y publicando legislación que propone explícitamente la necesidad de mejorar el estatus y el respeto social hacia el profesorado. No obstante, las divergencias se encuentran en las acciones políticas, tales como el hecho de que las autoridades chinas comenzaron hace mucho tiempo a promover estrategias de poder blando para elevar el estatus del docente, y en la percepción social real debida a la relación histórica en China entre educación y estatus social. Como resultado, el estatus del docente es más alto en China, donde además de políticas integrales están tratando de atraer, seleccionar y retener a los mejores candidatos. España todavía carece de una dinámica comprehensiva para mejorar el estatus de los profesores y el atractivo de la carrera docente. Está dinámica necesitaría involucrar políticas para todas las etapas de enseñanza profesional, y la implicación de todas las partes interesadas (administraciones de los diferentes departamentos en relación con la sociedad y la educación, los docentes de todo tipo de instituciones educativas y las familias).

El reflejo de estas percepciones se muestra también en la función social y el rol de las familias y los estudiantes en educación. En España, la historia y la cultura han minado, generalmente, el papel de los profesores, mientras que los profesores chinos están históricamente muy valorados (véanse secciones 5.1.1 y 5.2.1). Aun ahora, las familias y los estudiantes chinos admiran a los docentes como actores que ofrecen conocimiento y, la responsabilidad principal en el rendimiento de los estudiantes es asumido por los propios estudiantes y sus familias. En consecuencia, y dada la metodología impulsada en China, dirigida a la realización de exámenes, los estudiantes chinos obtienen los mejores resultados académicos en PISA, mientras que los estudiantes españoles se sitúan aproximadamente en la media de la Unión Europea y la OCDE (véase gráfico 6.14). En esta situación, se espera que los docentes chinos enseñen todo el plan de estudios y hagan uso de explicaciones muy fluidas en lugar de dar respuestas individuales a las necesidades de los estudiantes. Su objetivo principal es el conocimiento académico. Sin embargo, de los profesores españoles se espera que hagan uso de menos metodologías frontales y de más habilidades de comunicación (tabla 6.14).

6. ¿Cuáles son los dilemas y retos que tiene que afrontar actualmente cada uno de estos países en relación a la formación inicial de los docentes de secundaria?

Siguiendo el diseño de la tesis, las secciones 5.1.1 y 5.2.1 abordan los desafíos y dilemas de cada país con respecto a la formación del profesorado de secundaria. Estas dos secciones son esenciales para darse cuenta de cómo todas las características analizadas a lo largo de la tesis tienen consecuencias en los sistemas actuales de formación de docentes. La globalización y las organizaciones internacionales tienen un impacto sobre las realidades a nivel nacional; Sin embargo, la profundidad de este impacto depende de las elecciones, los recursos, la historia, la cultura, la filosofía, los objetivos y las prioridades nacionales. Las autoridades educativas adaptan sus sistemas siguiendo las directrices que consideran positivas para sus propios fines nacionales.

En este sentido, tal como se expresa en las secciones 5.1.2 y 5.2.2, las críticas de ambos países hacen referencia a la poca profundidad de las últimas reformas, que han fracasado, por ejemplo, en aumentar realmente el peso de la pedagogía, la psicología y la práctica. Ambos países se enfrentan ahora a retos para mejorar el plan de estudios de la formación del profesorado siendo coherentes con un mejor desarrollo social y en preparar a los profesores para gestionar y cubrir las necesidades de los estudiantes. Las sociedades están cambiando más rápido que cualquier programa de formación docente, y la solución implica un cambio de paradigma desde la enseñanza basada en conocimientos hacia la enseñanza integral organizada en el aprendizaje por áreas, módulos y créditos en China, y en un diseño basado en competencias en España.

No sólo los planes de estudio, sino un equilibrio entre la especialización de los docentes en una materia y su conocimiento generalista, así como la organización de los profesores en departamentos cerrados, están sujetos a valoración en ambos países (véanse secciones 5.1.2 y 5.2.2). En la actualidad, este tipo de organización limita el intercambio académico entre profesores de diferentes campos y niveles, así como la colaboración y coordinación de sus relaciones con otros profesores y estudiantes. Históricamente, y debido al hecho de que los profesores generalmente se ocupan de sus clases de forma individual, la enseñanza ha sido entendida como una carrera solitaria, lo que ha limitado el nivel de cooperación entre los profesores de las diferentes materias. Como resultado, la colaboración es uno de los principales retos a tratar en cuanto a los antecedentes de la docencia, no sólo entre los profesores, sino también entre los diferentes centros de enseñanza, como las universidades, institutos de secundaria e instituciones de aprendizaje permanente.

Otra convergencia entre los retos que deben afrontar China y España pertenece al proceso de selección de los estudiantes de formación del profesorado, aunque el énfasis recae sobre características disímiles. Como se explica en la sección 5.1.2, China está tratando de reformar sus procedimientos de selección para suavizar el exceso de énfasis en los exámenes. Sin embargo, debido al gran número de estudiantes, la búsqueda de un sistema justo e imparcial es altamente complicado. Por el contrario, España está tratando con una escasa selección (véase sección 5.2.2) lo que permite que un gran número de estudiantes accedan a los programas de formación del profesorado y un gran número de universidades oferten este tipo de programas. Esta falta de coherencia entre la oferta de formación docente y la demanda del mercado de trabajo, entre otras razones, continúa reduciendo el, tradicionalmente bajo, estatus de los docentes.

Las divergencias en los dilemas, que a su vez guían futuros programas de formación del profesorado, están claramente relacionados con los desafíos nacionales. Por un lado, China necesita encontrar un equilibrio entre la cantidad y la calidad, y un equilibrio tanto en cantidad como en calidad entre las regiones. Las demandas chinas en materia de educación tienen que cumplir con los requisitos de las zonas rurales y urbanas, y cubrir los estándares de calidad de la educación en zonas y familias con una alta disparidad en ingresos y recursos. Debido a la historia de la educación china, la formación del profesorado también está tratando de ajustar la importancia de la perspectiva centrada en el estudiante, para fomentar el crecimiento individual, la creatividad y la colaboración entre los alumnos.

Sin embargo, estas modificaciones de la filosofía educativa pertenecen de alguna forma a la "historia de préstamos" que se menciona en la sección 5.1.1, y a la necesidad de adaptar la educación a las perspectivas y nociones de Asia, que se abordan en la sección 4.1.4. Tal como se explica en la sección 4.3.1, las autoridades chinas también se enfrentan al reto de encontrar un equilibrio, o camino del medio, entre las metodologías occidentales y las tradiciones y la cultura china.

Por otro lado, España tiene que hacer frente a sus propios desafíos específicos en la formación inicial del profesorado de secundaria. A nivel nacional, la inestabilidad de la legislación (véase sección 4.2.5.1) afecta al establecimiento y la valoración de los programas, lo que, a su vez, dificulta el aumento del estatus y la autoestima del personal docente (ver tabla 6.12). Al mismo tiempo, las reformas requieren cierto apoyo financiero

y recursos, que no siempre están disponibles. La evaluación de los diseños de los nuevos planes, por una agencia de calidad, requiere recursos humanos y temporales, lo que se convierte en una pérdida de tiempo para los programas que cambian frecuentemente.

No sólo la inestabilidad de la legislación, sino también la disparidad de las tasas y notas de corte entre las universidades, principalmente en las entidades privadas, es un dilema en el contexto español, un signo de la mercantilización de la educación que ya se ha mencionado, y que disminuye el estatus y la profesionalización de la carrera. Otros desafíos son la necesidad de promover la innovación y mejorar la experiencia práctica y la posibilidad de incluir una base común para todos los docentes.

7. ¿Cuáles son los modelos de formación inicial del profesorado de secundaria que se llevan a cabo a nivel nacional en China y en España? ¿Cómo están esos modelos definidos en términos de características concebidas como principales en los sistemas de formación inicial de docentes de secundaria (instituciones, vías, currículo, cualificaciones y selección)?

   En general, como se muestra en la tabla 7.1, el sistema de formación inicial del profesorado de secundaria en China se lleva a cabo en centros de educación superior en ambos modelos, simultáneos y consecutivos. El plan de estudios es detallado por cada universidad siguiendo ciertas pautas nacionales que están diseñadas tanto en los programas de formación profesional de 3 años como en títulos de grado de 4 años, aunque algunas universidades también ofrecen programas de máster. La propuesta curricular oficial data de 2012 y el plan clasifica cinco áreas de aprendizaje (ver tabla 7.2). Además de las clases específicas de formación del profesorado y la especialidad, todos los grados de licenciatura comparten algunas clases básicas, tales como la formación militar o cultura e historia de China (ver tabla 7.3).

   El peso de la pedagogía ha sido tradicionalmente escaso, pero las universidades normales y las nuevas tendencias están aumentando este porcentaje (ver sección 5.1.1 y gráficos 7.1 y 7.2). Todos los programas de educación inicial para futuros profesores de secundaria incluyen prácticas, pero este componente es aún criticado por su baja armonización y la dificultad de llevar a cabo una práctica útil debido al exceso de trabajo y a la presión que soportan los tutores durante ese período (véase sección 5.1.2 y tabla 7.4).

Como se ve en la tabla 6.11, en China, las cualificaciones pertenecen principalmente al nivel CINE 6, pero todavía es posible encontrar programas en CINE 5, y en algunas universidades, en CINE 7, principalmente con una duración de 2 años. Las cualificaciones son válidas en todo el país, pero los docentes deben registrarse en la región donde quieren enseñar (tabla 7.11). Este derecho se adquiere generalmente al trabajar o estudiar en dicha región. No hay examen final para obtener un título, pero hay un examen alternativo que concede directamente esta titulación cuando los profesionales proceden de otros campos (ver tabla 7.12). Como se muestra en las tablas 7.14 y 7.15, hay dos tipos de selección de estudiantes, pero la más común es la de selección normal basada en las notas del Gaokao, o el nivel educativo precedente. Algunas universidades normales también seleccionan a estudiantes sobresalientes para aplicar la política de exención de tasas (ver tabla 7.16).

En el caso de España, los profesores de secundaria siempre se forman en instituciones terciarias en un modelo consecutivo (máster de 1 año). La organización curricular se estableció a nivel nacional en 2007 (véase cuadro 7.2), aunque las universidades tienen cierto nivel de libertad para distribuir algunos créditos y diseñar las clases incluidas en cada una de las tres áreas de aprendizaje. Los planes tienen que estar de acuerdo con el EEES, y los programas se calculan en 60 ECTS, de los que, al menos 16, se destinan a las prácticas (véase la sección 5.2.1 y gráficos 7.1 y 7.2).

Al igual que en China, el período de prácticas plantea algunas críticas debido a la falta de armonización entre las universidades y la falta de coordinación entre los centros educativos y las universidades (véase sección 5.2.1 y tabla 7.4). Una vez que el programa se ha completado, los estudiantes reciben una cualificación en formación del profesorado de secundaria. No hay un examen final ni un examen o vía alternativa para la obtención de esta titulación (ver tabla 7.12). El único título oficial pertenece al nivel CINE 7, y las cualificaciones son válidas en todo el país (tabla 7.11). La selección de estudiantes corresponde a cada universidad, pero el requisito mínimo es tener un título de grado que da acceso a nivel de máster, en un tema específico (en relación con cualquiera de las áreas que se enseñan en la etapa de secundaria), y por lo menos un nivel B1 en una lengua extranjera (ver tablas 7.14 y 7.15).

8. ¿Cuál es el perfil competencial que cada país requiere a los futuros docentes de educación secundaria?

En ambos países, las competencias, entendidas como base transversal o estándares profesionales, están relacionadas con los conocimientos, habilidades y actitudes. Como se evidencia en la sección 7.3, en relación con la categoría 8 de comparación, estos componentes muestran principalmente convergencias entre los dos países. Sus propuestas nacionales, así como la propuesta supranacional de la Unión Europea, incluyen competencias para desarrollar y consolidar las políticas de educación, cada una de ellas de acuerdo con su propia configuración, así como con el desarrollo profesional. La organización de las competencias en categorías difiere de un documento a otro, pero los contenidos son muy similares (véanse cuadros 7.5 a 7.10).

Por ejemplo, el área de conocimiento (tabla 7.7) incluye componentes análogos, tales como conocimiento de la materia, pedagogía, metodologías de evaluación y diseño curricular. Competencias en relación con las actitudes de los profesores (tabla 7.8) hacen hincapié en la necesidad de ser más comprensivos con la diversidad de los estudiantes, ser flexible y mostrar actitudes críticas para mejorar las prácticas de enseñanza. Se anima a los profesores a desarrollar tanto las habilidades de investigación y de las TIC como a tomar un papel activo en sus centros (tablas 7.9 y 7.10).

Una de las divergencias es que en España los diseños de los programas de formación inicial de docentes de secundaria se han establecido en torno a un perfil competencial concreto, mientras que China diseña los estándares para todos los docentes. Los profesores de secundaria y los programas de formación inicial están formulados bajo una perspectiva más tradicional basada en áreas (ver tabla 7.5). Otras divergencias pertenecen al pensamiento filosófico y político, tales como la influencia de los valores comunistas o democráticos (tabla 7.6), o en el entendimiento cultural, como la colaboración con la comunidad, que no está resaltado en la propuesta europea o española, o la relación con los servicios sociales, en la que no hace hincapié el esquema chino (tabla 7.10).

9. ¿Cuáles son las propuestas divulgadas por organizaciones internacionales en cuanto a estándares de calidad en la formación inicial de los docentes?

Las organizaciones internacionales y supranacionales están intentado promover políticas abiertas, flexibles, económicas, pero de alta calidad, en las que todos los países tienen margen de mejora, como se muestra en la tabla 5.16. Esta cuestión se trata en la sección 5.3, donde los estándares se organizan en torno a las categorías de comparación de la tesis con respecto a la formación del profesorado (CC. 6 a CC.10).

En la dimensión 6, instituciones y modelos, los estándares internacionales aconsejan a los países la creación de estructuras flexibles, programas de educación a distancia, a tiempo parcial, el diseño de programas de post-grado o consecutivos, o la creación de componentes comunes para los diferentes tipos de colegios y niveles. Con estos consejos, las organizaciones internacionales están tratando de abrir la profesión a una amplia gama de personas, adaptando los programas de formación del profesorado a situaciones personales tanto como sea posible. La posibilidad de inscribirse en estos programas se limita a veces a personas con dedicación a tiempo completo y a perfiles específicos y limitados. Con estas recomendaciones, la formación del profesorado debería convertirse en fácilmente accesible, pero también hace necesario salvaguardar otros estándares para mantener la calidad de los programas.

En referencia a esta cuestión, las preferencias de las organizaciones internacionales se pueden detectar en las propuestas de diseños curriculares (la siguiente categoría de comparación). Las organizaciones internacionales promueven estrategias de formación del profesorado que se centren en aulas complejas y en aportar a los docentes los conocimientos necesarios para detectar las dificultades de los estudiantes, diseñar soluciones a dichos problemas, llevar a cabo trabajos de investigación y hacer uso de las TIC. Estos elementos, como se ha visto en las secciones anteriores, son parte de los contextos nacionales, desafíos y dilemas que deben abordarse en la mayoría de las sociedades actuales. Además, de acuerdo con las propuestas internacionales, todos estos componentes tienen que ser incluidos en los programas con un equilibrio adecuado entre la teoría y la práctica.

Una vez más, como en las directrices nacionales, organizaciones internacionales ponen un gran énfasis en la práctica. Mantienen la relevancia de contar con una experiencia práctica dentro del aula, si es posible entrando en las clases desde el principio del programa. Las organizaciones internacionales centradas en educación también hacen hincapié en el papel de los tutores y la necesidad de que los estudiantes reciban apoyo durante este período de prácticas.

Las sugerencias de la octava categoría de comparación, competencias profesionales, son bastante imprecisas, ya que las competencias pertenecen a perfiles nacionales específicos que deben estar en consonancia con las políticas y objetivos nacionales. Sin embargo, las propuestas internacionales alientan a las naciones a diseñar perfiles claros y

concisos para los docentes, y a incluir competencias de investigación. También se reitera la necesidad de fomentar competencias en relación con el conocimiento, la pedagogía, la cooperación con otros agentes que intervienen en los centros educativos, y el aprendizaje permanente.

En cuanto a la categoría de comparación que hace referencia a las cualificaciones, las organizaciones internacionales recomiendan tener un marco nacional de cualificaciones, que se realice una evaluación de las cualificaciones por parte de una agencia de calidad independiente y tener en cuenta las experiencias significativas previas a entrar en la docencia, entre otros. Una vez más, la calidad y la cantidad son una preocupación para las organizaciones internacionales, que recomiendan, en la categoría de comparación de selección de los estudiantes y futuros docentes, que las instituciones de formación de docentes tengan unos estándares de selección y un estatus altos para preparar a los candidatos con suficientes conocimientos sobre la materia. En este sentido, las directrices instan a planificar procesos de selección comprehensivos, a evaluar la motivación de los candidatos, así como sus habilidades, conocimientos y cualidades personales.

Después de haber contestado a todas las preguntas relacionadas con el primer objetivo general, es posible confirmar la primera hipótesis comparativa:

Los sistemas de educación inicial de los profesores de secundaria tienen lugar, tanto en China como en España, en instituciones de educación superior y tienen características exclusivas nacionales como consecuencia de varios factores, incluyendo tanto componentes educativos como no educativos.

HIPÓTESIS 2

Las preguntas 10 y 11 se han diseñado para cumplir con el segundo objetivo general: "Detectar convergencias y divergencias entre los sistemas de formación inicial de docentes de secundaria en España y en China, así como posibles tendencias internacionales y sus directrices en relación a la formación inicial de los profesores de secundaria". La respuesta a estas preguntas es la siguiente:

10. ¿En qué aspectos convergen o divergen los modelos chino y español?

Al considerar estas conclusiones, es importante destacar dos características de ambos países, que son, a su vez, una convergencia entre las dos realidades nacionales e

internacionales a lo largo de varias agendas. La primera es la reciente puesta en marcha de un nuevo programa de educación inicial para docentes de secundaria y de unos nuevos estándares para los programas de formación en ambos países (ver tabla 7.2). Del mismo modo, ambos países están aún esperando para poder evaluar estas nuevas pautas de educación, después de un período de estabilidad. El segundo es el hecho de que ambos países están tratando con grandes retos económicos y culturales y los dos siguen posicionando a los docentes y su formación como elementos clave de la calidad de la educación (véanse secciones 4.1.5.2 y 4.2.5.2), una prueba del interés nacional en la formación docente.

En las categorías comparativas con respecto a las instituciones y los modelos (CC.6) y a las cualificaciones (CC.9) existe una clara tendencia que se confirma por ambos países: todos los futuros profesores de educación secundaria se preparan en instituciones de educación superior, en programas que conducen a una titulación terciaria (tablas 7.1 y 7.11). En este sentido, el máster ha sido, sin duda, un gran paso en la formación inicial del profesorado de secundaria en España. En este asunto, China ha mejorado sus sistemas moviendo toda la formación del profesorado hacia las instituciones superiores (véase sección 5.1.1 y tablas 7.2 y 7.11).

Además, la misma cualificación, obtenida en las instituciones de educación superior, es en ambos países el único requisito para preparar a los docentes para trabajar en la educación secundaria inferior y superior (véase cuadro 7.11). El personal docente para el nivel inferior y superior se preparan en los mismos programas (en algunas excepciones, debido a la escasez de docentes, China puede preparar a los profesores de educación secundaria básica en un nivel más bajo. Sin embargo, está situación está siendo erradicada).

Este elemento está lejos de ser trivial para este estudio, ya que los profesores de secundaria tienen que lidiar con alumnos en la enseñanza obligatoria, así como en la educación post-obligatoria (ver figura 6.1). Los estudiantes de estos niveles de educación secundaria tienen motivaciones, contextos y objetivos educativos completamente distintos, pero ninguno de los países ofrece programas o modelos diferentes que tengan en cuenta estas características.

Las divergencias en materia de instituciones y modelos, y cualificación, hacen referencia a detalles concretos tales como el nivel dentro de instituciones de educación superior (licenciatura o máster) y la flexibilidad para acceder a la profesión (tablas 7.1,

7.11 y 7.12). Aunque China aún tiene ciertos programas en las escuelas normales, considerados como CINE 5, la tendencia es situar todos los programas dentro de CINE 6 y 7. En este sentido, China pone de relieve el papel de las universidades normales como instituciones clave para la preparación de los docentes, mientras que España prefiere universidades generales organizadas en facultades.

Los programas y las vías difieren ligeramente entre China y España, e incluso entre las universidades chinas (tabla 7.1). China es más flexible y permite que las universidades y otras instituciones terciarias planifiquen modelos diferentes en los distintos niveles. Las universidades pueden ofrecer modelos simultáneos y consecutivos, a pesar de que la legislación hace hincapié en los programas de modelos concurrentes. España, a diferencia de esta variedad, sólo tiene un programa de máster, lo que hace que la armonización entre los programas nacionales sea más sencilla.

Otras convergencias se han detectado en elementos que pertenecen al diseño curricular y la organización (CC.7, en tablas 7.2 a 7.4). Los programas de educación inicial de los profesores de secundaria tienden, sin duda, a contener tanto conocimiento de la materia como pedagogía. En comparación con los planes anteriores, ambos países están aumentando progresivamente el peso de la pedagogía y la estabilidad de sus programas.

Este incremento es perceptible cuando se analiza el porcentaje de clases dedicadas a la didáctica de las áreas, en relación al total del programa (gráficos 7.1 y 7.2). El peso de los créditos de pedagogía y habilidades de la enseñanza está progresivamente alcanzando un 20% en ambas naciones. Además, la organización de las clases está lentamente cambiando desde una clara ruptura entre el conocimiento de la materia y la pedagogía hacia un modelo más integrado. No obstante, los modelos completamente integrados, en los que el conocimiento se organiza alrededor de competencias y la diferenciación entre las prácticas, los conocimientos y las clases de pedagogía es vaga, o modelos modulares, donde los estudiantes tienen un alto nivel de libertad para planificar su propio grado académico, son inexistentes.

Los programas actuales incluyen clases como "enseñanza y aprendizaje de [área]" o "bases pedagógicas de [área]" (tablas 5.4 a 5.7, 5.11 y 5.13), que muestran la preocupación de universidades y administraciones sobre los conceptos previos que los futuros estudiantes tienen sobre la educación, así como la necesidad de modernizar las metodologías, los planes de estudio y los sistemas de evaluación (secciones 5.1.2 y 5.2.2).

En esta categoría de comparación, la organización curricular, la divergencia fundamental es la existencia de un plan de estudios para todos los grados en China, pero no en España (ver tabla 7.3). Los profesores españoles pueden estar perdiendo una oportunidad de trabajar habilidades básicas para mejorar su trabajo, tales como las TIC, lenguas extranjeras o habilidades de investigación. Este hecho muestra un área de mejora hacia una mayor coherencia entre lo que se promueve en las directrices internacionales, nacionales y supranacionales, como la pertinencia de este tipo de habilidades, y lo que más tarde se lleva a cabo en las universidades. Sería interesante evaluar si todas estas habilidades están siendo asumidas como competencias transversales, y los resultados de dicha planificación.

Por el contrario, una convergencia entre ambos países es la falta de un plan de estudios específico a lo largo de todos los programas de enseñanza para los diferentes niveles (véase tabla 7.2), lo que facilitaría el movimiento de los maestros y profesores de un nivel a otro. Este movimiento se promueve a menudo separando maestros de educación infantil y primaria, por un lado, y de secundaria inferior y superior, por el otro, pero, en ambos países, una barrera invisible separa a los maestros en un lado de los profesores en el otro.

Como se explica en el parámetro 21 (tabla 7.4), la divergencia principal en esta categoría de comparación se encuentra en el tiempo que oficialmente se dedica a las prácticas, en teoría, más largas en China, pero en la realidad, aplicadas de una forma similar a la española. La convergencia más notable es la falta de armonización y estructuración nacional de este período. La responsabilidad principal recae sobre cada universidad y ninguno de estos países tiene directrices específicas para esta parte del programa. De hecho, tal como se detecta en estas dos categorías comparativas, la práctica, como un concepto, está tomando lentamente una parte más central en la formación docente, pero no es aún el núcleo de los programas (véanse secciones 5.1.5 y 5.2.5). La práctica no es el centro de los programas de formación del profesorado, sino un complemento de las clases teóricas.

Otras convergencias en este aspecto se encuentran en los tipos de prácticas. Las prácticas se diversifican en tipos (observación y participación o activas), y ambos países requieren una tesis final para reflexionar sobre esta experiencia de aprendizaje (ver tabla 7.4). Sin embargo, el tiempo para reflexionar acerca de esta práctica es escasa (sobre todo

en España) y ninguno de los países ha diseñado unas directrices nacionales para la tesis o su evaluación.

Como se muestra en la tabla 7.4, otra tendencia en las prácticas es el momento en que se lleva a cabo y el número de períodos. La mayoría de las universidades establecen que se realice al final de la especialización académica (el último año en China y el último semestre en España), principalmente en las prácticas en las que los estudiantes tienen una participación activa. Este hecho demuestra la desconexión entre la teoría y la práctica. Es de vital importancia para una mayor consolidación de la identidad de los profesores que los programas integren la teoría y la práctica, donde los estudiantes puedan ser críticos con sus propias prácticas y tengan más de una experiencia práctica para desarrollar un sentido de crecimiento profesional.

Uno de los elementos centrales para el desarrollo de una práctica útil es, sin duda, la figura del mentor o tutor. Aunque un análisis de esta figura no se ha incluido en esta investigación, los documentos nacionales estudiados no hacen hincapié en este agente. A nivel mundial, las tendencias están empezando a analizar cómo seleccionar los mejores profesores para tomar este papel, tratando de establecer requisitos y funciones generales. Las políticas en esta materia son recientes y no hay aún un consenso general o una tendencia clara, aparte del hecho de que no hay tendencias concretas o detalladas. Por lo tanto, otra convergencia es el hecho de que el papel y la selección de los tutores se han dejado a un lado en la mayoría de las propuestas y en la legislación, o son más bien imprecisas (véanse secciones 5.2.5 y 7.2.4). Todavía no se han diseñado e implementado los requisitos para convertirse en tutor, los seminarios o la actualización de la educación que se deben brindar a estos tutores, el momento en que serán capaces de asumir este papel y las consecuencias o recompensas profesionales.

La categoría de comparación enfocada hacia las competencias profesionales (CC.8) subraya más convergencias y divergencias. La formación del profesorado no ha sido generalmente diseñada en función a un perfil de competencias, sino que pretendía llegar a un determinado perfil de competencias (véase tabla 7.5). Las competencias se han convertido en una tendencia clara en el contexto internacional, no sólo para la formación del profesorado, sino para perfiles profesionales muy amplios. Los contextos nacionales pueden mostrar pequeñas diferencias, pero las convergencias generales son evidentes. Los países están ampliando sus programas para incluir habilidades, actitudes y conocimientos. En realidad, las competencias aparecen en los documentos nacionales y

supranacionales, pero su aplicación y puesta en práctica sigue siendo limitada y confusa, ya que predominan las metodologías y organizaciones curriculares tradicionales (ver CC.7), lo que supone un lento proceso de cambio. De hecho, el análisis de las propuestas concretas de las universidades, muestra como los planes, evaluaciones y prácticas siguen centrándose en expresiones tradicionales de conocimiento (temas, exámenes tradicionales, objetivos concretos de conocimiento, etc.).

A la luz de los datos (que se muestran en las secciones 5.1.6 y 5.2.6 para los datos nacionales y la sección 7.3 de la yuxtaposición y la comparación de esta dimensión), la categoría de comparación de las competencias profesionales muestra principalmente convergencias, aunque organizada en diferentes categorías y bajo diferentes filosofías que coinciden con la organización política de cada país. Las áreas de conocimientos, actitudes profesionales y habilidades básicas, muestran sobre todo convergencias, mientras que las divergencias tienen su origen en el grado de relevancia dado a cada componente, tal como la actitud de los profesores hacia los estudiantes y los valores morales altamente valorados en China o los valores de inclusión, interculturalidad y derechos humanos, destacados en Europa.

Las competencias que comprenden las estrategias para el desarrollo de un plan de aprendizaje permanente, junto con las tendencias modernas de la educación, se están promoviendo progresivamente (ver tabla 7.6). En consecuencia, los docentes tienen que tener la posibilidad de entrar en un sistema en el que se alienta y premia el desarrollo profesional. Como sucede en China, esta recompensa no puede limitarse a los ingresos económicos, sino a políticas integrales con respecto a toda la sociedad y a la comunidad educativa (ver tabla 6.10). En este contexto, los gobiernos tienen que estar dispuestos a invertir en la educación permanente y en la mejora del atractivo de la enseñanza como una forma de avanzar en la cohesión económica y social. A su vez, estas políticas aumentarían la identidad y la profesionalización de los docentes, lo que haría que la carrera fuese más atractiva para los mejores candidatos. El principio de estas políticas integrales debe comenzar en la formación inicial del profesorado, pero satisfacer la futura educación de los profesores y las condiciones de trabajo.

La selección de los estudiantes para los programas de formación inicial de docentes, la última categoría de comparación (CC. 10), ha sido abordada en las secciones 5.1.8, 5.2.8 y 7.5, y pone de relieve otra convergencia: la selección todavía se basa principalmente en el rendimiento académico de un nivel previo de educación. Algunas

universidades en ambos contextos nacionales están incluyendo progresivamente otros factores tales como entrevistas o cartas de motivación, pero estos casos son aún excepciones, y la valoración integral depende de las iniciativas de las universidades y no de directrices nacionales o regionales.

Ciertas divergencias en esta categoría de comparación están motivadas, no exclusivamente por el tema en sí, sino por el carácter inherente de las instituciones superiores de cada país. Los estudiantes chinos se esfuerzan por entrar en buenas universidades y existe una fuerte selección que se realiza en el momento de iniciar la educación superior (secciones 4.1.5.3, 4.1.5.6, 5.1.8 y 7.5.1). Esta competitividad motiva que las notas mínimas sean más altas para todos los grados, mientras que España requiere notas y perfiles altos exclusivamente para ciertas especialidades como la medicina o las ciencias (tabla 7.14).

Las estrategias para la selección de los estudiantes que pretenden convertirse en profesores de secundaria tienen que asegurar que el cuerpo de profesores de enseñanza secundaria está formado por candidatos comprometidos, motivados, talentosos y de alto nivel, que estarán listos para ser mentores de los estudiantes y de profesores noveles, y que se ajustarán y participarán activamente en las centros multidisciplinares y activos, así como en iniciativas de formación continua.

La selección no debe ser más restrictiva, sino establecerse con mayor coherencia. Es importante tener en cuenta las experiencias anteriores, el interés, la motivación y los rasgos personales, pero sólo es comprensible cuando las características del lugar de trabajo, la sociedad, el tipo de estudiante y sus necesidades, así como las perspectivas que las administraciones pueden ofrecer a los candidatos, han sido analizadas. Este análisis previo es necesario para articular un proceso en el cual se preparan profesores y estos tienen la posibilidad de acceder a una determinada carrera y desarrollo profesional, pero también para planificar las herramientas necesarias para tener éxito profesional y para evitar el desgaste (burnout) o profesiones estáticas. Sólo al ofrecer un camino claro y de alto nivel profesional pueden las universidades ser más selectivas con sus candidatos.

En esta categoría de comparación, una divergencia significativa entre China y España es la existencia de políticas integrales que abordan las condiciones laborales de los profesores y la educación en China y la falta de este tipo de políticas en España (véase sección 6.2.2 y tablas 6.10 y 7.16). China tiene una larga tradición de políticas integrales, ya que las culturas asiáticas entienden cada elemento sólo en relación con otros

componentes (el concepto de armonía abordado en la sección 4.3.1). Las mismas metodologías se encuentran en la medicina china, en el Feng Shui o el equilibrio Yin-Yang. Los chinos entienden el mundo a través de las relaciones, por lo que no es sorprendente que los planes educativos estén ligados a políticas integrales.

11. ¿Concuerdan los sistemas de formación inicial del profesorado de secundaria de estos países con los estándares internacionales de calidad?

Además de comparar la formación de los docentes en China y en España, y debido a que "la producción de políticas en materia de educación no sólo está enmarcada en estas nuevas estructuras dentro de las naciones, sino también por la aparición de estructuras supranacionales" (Lingard, 2014, p. 88), uno de los objetivos de esta investigación era comparar ambos sistemas con los estándares de calidad internacionales y supranacionales, intentando detectar las tendencias internacionales.

En esta categoría las tendencias nacionales cumplen con la mayoría de las propuestas internacionales, aunque China, debido a la variedad que se da dentro de su propio territorio, cumple estos estándares más que España en tres de los indicadores (ver tabla 7.23 y gráfico 7.3). De hecho, como resultado del análisis en los capítulos 6 y 7, y al comparar las iniciativas chinas y españolas con los estándares internacionales, es posible afirmar que ambos países siguen tendencias similares. Estas tendencias se apoyan y promueven desde el fenómeno de la globalización y desde ciertas concepciones modernas de educación, ya que "tal vez porque el rendimiento escolar a menudo se ha asociado con el estatus de las élites, la organización y el enfoque de la educación en casi todas partes, en la era moderna, refleja las influencias internacionales, algunas con más fuerza que otras" (Samoff, 2003, p. 53).

La comparación con las directrices propuestas por las organizaciones internacionales (como se muestra en la sección 5.3), en relación con la formación inicial de los docentes, muestra cómo ambos países confirman las tendencias globales y parecen seguir tendencias similares en la mayoría de los elementos, como las competencias profesionales, la existencia de una preparación común para los docentes de educación secundaria inferior y superior, y la evaluación de los programas de la universidad por una agencia externa (ver tablas 7.17 a 7.22).

Debido a que China tiene múltiples modelos y profundas diferencias entre las provincias y universidades, ciertos indicadores internacionales se cumplen parcialmente.

Este es el caso de indicadores relativos a la temporalización de las prácticas en programas de licenciatura o máster o la oportunidad de pasar a un curso diferente si la motivación de un estudiante cambia, lo cual es posible en programas de grado, pero no en estudios de máster que abordan específicamente la formación del profesorado.

Además de estas variaciones, en términos generales, las políticas chinas están más en línea con las directrices internacionales que las políticas españolas (véase la tabla 7.23 y gráfico 7.3). Por ejemplo, China cumple con los indicadores de flexibilidad de las estructuras de formación del profesorado, con programas con prácticas más largas y en los que los estudiantes acceden a las aulas más pronto, altos estándares de admisión en universidades de alto estatus y el establecimiento de incentivos para seleccionar a los mejores candidatos.

Vale la pena mencionar que la mayoría de las divergencias entre las propuestas nacionales e internacionales son, paradójicamente, convergencias entre China y España. Este es el caso de la falta de un consenso nacional acerca de la colaboración entre las instituciones y los centros educativos, el hecho de que los estudiantes o personas cualificadas en otras áreas no puedan acceder a la profesión y ganar un sueldo sin la cualificación adecuada y específica, que las cualificaciones no incluyen habilidades de comunicación o cualidades personales y los procesos de selección no comprenden una evaluación acerca de la motivación de los candidatos, habilidades o cualidades personales.

Después de haber contestado a todas las preguntas relacionadas con el segundo objetivo general, y a la luz de las conclusiones del estudio, es posible afirmar que la formación inicial de los profesores de secundaria en ambos países, China y España, muestran tendencias comunes, y que los programas universitarios, dinámicas y características muestran convergencias. Estas convergencias se encuentran también al compararlos con las directrices de las organizaciones internacionales, por lo que es posible confirmar la hipótesis comparativa 2:

A pesar de las divergencias en algunos componentes, hay convergencias entre los sistemas modernos de formación inicial de docentes de secundaria de ambos países y con las tendencias internacionales, que muestran, a su vez, convergencias euro-asiáticas.

HIPÓTESIS 3

La respuesta a la pregunta 12 trata de resolver el tercer y último objetivo general: "Proponer posibles reformas en el modelo español de formación inicial del profesorado de secundaria en el contexto de las tendencias internacionales detectadas". Esta respuesta se estructura de acuerdo a los resultados de las secciones anteriores y de acuerdo a la organización general de la tesis.

12. De acuerdo a los hallazgos, ¿Cuáles son las debilidades del sistema de formación inicial de los docentes de secundaria en España?

Las debilidades del sistema español relacionados con la categoría de comparación de instituciones y modelos son apreciables en su escasa flexibilidad y la inexistencia de vías alternativas (ver tabla 7.1), mientras que es extremadamente positivo y concuerdan con las directrices internacionales y supranacionales en que toda la formación del profesorado se lleve a cabo en instituciones terciarias (ver tablas 7.1 y 7.17). El hecho de que un sólo máster de 1 año otorgue la posibilidad de trabajar como profesor de secundaria da pocas opciones a que otros profesionales o personas que han iniciado su carrera en otros campos se adhieran a la enseñanza.

Inicialmente, el máster representó una mejora, aumentando la armonización nacional y situando la formación del profesorado de secundaria como una prioridad nacional. También promovió una mayor armonización entre las universidades y trató de mejorar los defectos de los programas del sistema anterior (CAP), que eran, a veces, una mera formalidad para obtener la certificación (ver sección 5.2.1). Ahora, ciertos ajustes podrían seguir mejorando este máster.

En este caso, las debilidades que se pueden abordar en la dimensión de organización curricular (ver sección 5.2.5) se refieren a la mejor organización de las prácticas, ofreciendo a las universidades unas pautas generales y recomendaciones para la planificación del trabajo final de máster, una mejor relación entre las universidades y los centros de educación secundaria, y una base común mejor para la formación de profesores de secundaria y la formación de docentes en otros niveles. Los períodos de prácticas son cortos o carecen de normas nacionales de calidad. Cada universidad los distribuye de acuerdo con sus propios criterios, a menudo al final del máster (sección 5.2.5 y la tabla 5.13). Por lo tanto, es evidente que falta conexión entre la práctica y la teoría, y la retroalimentación entre las áreas no es fluida.

Además, la ausencia de una base común para la formación del profesorado limita el movimiento de los docentes dentro del sistema general de educación, incluso entre las etapas obligatorias tales como la educación secundaria inferior y la educación primaria. Aunque el diseño del plan de estudios del máster muestra algunas debilidades o diferencias con respecto a las propuestas supranacionales o internacionales, también presenta varias ventajas, como el hecho de que los estudiantes tengan un año completo para centrarse en la pedagogía y la educación, o la relevancia explícita de la práctica, cuyos créditos exceden los de las áreas de conocimiento genérico (véase el cuadro 5.11).

El máster tiene otro punto fuerte incluido en la categoría de comparación de las competencias profesionales. No sólo se ha diseñado en torno a un perfil profesional de competencias de los docentes (véase sección 5.2.6), lo que ya incluye una perspectiva más amplia de la formación del profesorado, sino que además el perfil español se acerca mucho al concepto europeo de competencias docentes, incluyendo tendencias similares y bases para el desarrollo de un docente profesional.

Este proceso de profesionalización también resalta en la dimensión de las cualificaciones, siempre exigiendo al menos un nivel CINE 7 (véase cuadro 7.11). En esta categoría, el aspecto a mejorar está relacionado con la coherencia entre lo que es un requisito legal (tener un máster de educación en cualquier especialidad) y lo que es necesario a nivel práctico (conocimientos en una determinada materia y nivel). Las universidades diseñan sus propias cualificaciones en virtud de una especialidad única o doble (por ejemplo, geología y geografía), sin que esto conlleve ninguna consecuencia en el posterior acceso a la profesión, lo que podría conducir a planes desiguales. Una mayor consistencia en los requisitos generales y una especialización específica podrían ser constructivos cuando se trata de aumentar el estatus de los docentes.

Sin embargo, esta falta de requisitos (cualquier persona con un máster en cualquier especialidad en un área determinada puede acceder a un trabajo de enseñanza en educación secundaria en cualquier otra especialidad similar), podría también ser entendida como una manera de añadir flexibilidad a la profesión.

A pesar de que no se puede considerar un camino alternativo, ya que los alumnos tienen que obtener un máster específico en la formación del profesorado de secundaria, se podría entender como una forma de abrir la carrera docente a otros profesionales con profundos conocimientos en un tema determinado, pero que no poseen título oficial en

ese tema concreto. Por ejemplo, un candidato con un título de licenciatura en un campo de conocimiento y experto en otros campos, podría superar la evaluación universitaria en su "otro campo" y cursar el máster en una "nueva" especialización.

Incrementar el estatus de los docentes incluye también la mejora del proceso de selección de los estudiantes que serán futuros profesores. Una de las debilidades centrales en la formación inicial del profesorado de secundaria en España es ya el primer paso para entrar en estos programas, en los que la selección es superficial y excesivamente amplia (véase sección 5.2.8 y tablas 7.13 a 7.15). La responsabilidad es asumida por cada universidad, y no se suelen diseñar evaluaciones exhaustivas de las características globales de los estudiantes tales como motivaciones o rasgos personales. El elemento principal es el resultado académico de un grado anterior que no tiene relación alguna con la educación. Aunque algunas universidades, sobre todo privadas, están empezando a establecer procesos de selección más amplios, la falta de un marco nacional de estándares o criterios generales está dando lugar a la creación de un grupo de profesores de secundaria que obtienen una misma cualificación, pero con poca armonización en su predisposición hacia la enseñanza.

Después de haber respondido a esta pregunta, y teniendo en cuenta la información extraída tras responder a las preguntas de las dos primeras hipótesis, es posible confirmar la hipótesis comparativa 3:

Las tendencias internacionales y la educación secundaria china y su plan de formación inicial del profesorado de educación secundaria pueden arrojar luz sobre el sistema educativo español, mostrando áreas de mejora y para la reflexión.

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ANNEXES

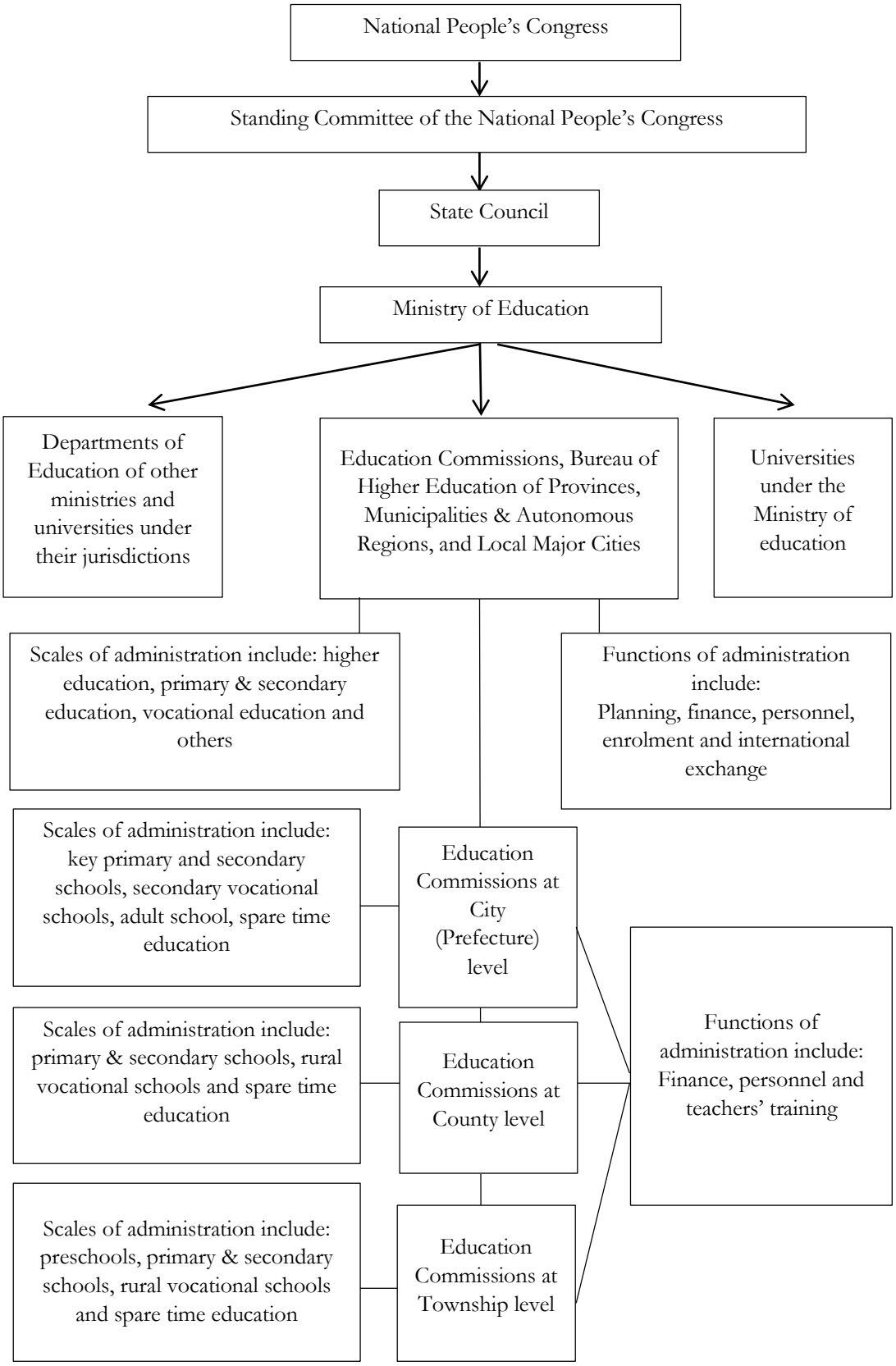
Annex 1: Chinese territorial organization.

Source: personal compilation from The Central People's Government of the People's Republic of China (on line) and The Chinese State Council website.

Level	Central Government				
Provincial 省级行政区	23 Provinces 省	5 Autonomous Regions 自治区	4 Municipalities 直辖市	2 Special Administrative Regions 特别行政区
Prefectural level 地级行政区	- Sub-provincial level city. 副省级城市 - Prefectural-level city. 地级市 - Autonomous Prefecture. 自治州 - Prefecture. 地区	- Sub-provincial level Autonomous Prefecture . 副省级自治州 - Prefectural-level city . 地级市 - Autonomous Prefecture. 自治州 - Prefecture. 地区 - Leagues. 盟	- Sub-provincial-level new area. 副省级市辖新区 - District. 市辖区 - County. 县	- District. 区 - County. 县
County level 县级行政区	- Districts. 市辖区 - Ethnic district. 民族区 - Special district. 特区 - County-level city. 县级市 - County. 县 - Autonomous County. 自治县 - Sub-prefectural-level city. 副地级市 - Forestry district.林区	- Districts. 市辖区 - County-level cities. 县级市 - County. 县 - Autonomous County. 自治县 - Banner. 旗 - Autonomous Banner. 自治旗		
Township level 乡级行政区 (Do not have responsability in education implementation)	- Subdistrict. 街道 - Town. 镇/ Township. 乡 - Ethnic Township. 民族乡 - County-level district. 县辖区 - Sumu. 苏木/ Ethnic Sumu. 民族苏木	- Subdistrict. 街道 - Town. 镇 - Township. 乡 - Ethnic Township. 民族乡 - County-level district. 县辖区 - Sumu. 苏木 - Ethnic Sumu. 民族苏木	- Subdistrict. 街道 - Town. 镇/Township. 乡/ Ethnic Township. 民族乡 - County-level district. 县辖区 - Sumu. 苏木/ Ethnic Sumu. 民族苏木	

Annex 2: Administrative organization of Chinese organization.

Source: Department of Foreign Affairs in Wang, X.F. (2003).



Annex 3: Normal universities accreditation and monitor quality benchmarks (2004) in China

Source: adaptation from Ministry of Education (2004b)

	Requisites for Institutions Accreditation	Enrolment restrictions	Benchmark to monitor institutions: qualification requirements
Student-teacher ratio	18	22	
Teachers with post-graduate degree as a proportion of full-time teachers (%)	30	10	
Teaching and administrative area (sq./person)	14	8	
Value of students and research equipment (CNY/student)	5000	3000	
Student books (book/student)	100	50	
Teachers with senior position as a proportion of full-time teachers (%)			30
Students area (sq./student)			54
Students dormitory area (sq./student)			6.5
Computers per 100 students			10
Multimedia and language lab places per 100 students			7
Percentage of new/additional teaching and research equipment (%)			10
Number of new books per student			4

Annex 4: Parameters for audit (follow-up) evaluations (2013) in China

Source: Ministry of Education (2013d)

Assessment parameters for audit evaluations		
Category	Elements	Highlights
Location and institutional objectives	School location	(1) Location and direction of the school (2) Explanation of the university location in the institution development plan
	Training objectives	(1) Personnel education objectives and basis (2) Justification and basis of the training objectives and standards.
	Status of the professional training center	(1) Policies and measures for the personnel training center implementation (2) Effectiveness and status of the training center (3) School leadership and emphasis on undergraduate teaching
Teachers	Quantity and structure	(1) Teachers quantity and structure (2) Planning and Development Trends for Teachers
	Education level	(1) Professional full-time teachers and teaching ability (2) Measures and effects of teachers' ethics
	Investment	(1) Budget for professors and associate professors of the undergraduate institutions (2) Conduct and participation in teaching research and teaching reforms
	Teacher development and services	(1) Policies and measures to enhance teachers' teaching ability and professional level (2) Services and opportunities to develop teachers' career
Teaching resources	Funds	(1) Teaching budget and guarantee mechanisms (2) Annual evolution in teaching budget (3) The distribution and efficiency of the education funds
	Facilities	(1) Teaching facilities according to teaching needs (2) Research facilities accessibility and utilization (3) Resources development and educational information situation
	Curriculum and training program	(1) Planning and implementation of professional programmes (2) Professional settings and structural adjustment. Development of professional and innovative majors

		(3) Training programmes, implementation and adjustment
	Curricular resources	(1) Curriculum construction, planning and execution (2) Curriculum structure and quality (3) Construction and selection of materials
	Social/human resources	(1) Measures and effects on cooperative education (2) Build teaching resources (3) Social donations
Education process	Teaching	(1)Teaching general ideas and policy measures (2) Training mode and training system institutional reform (3) Teaching and management of information
	Classrooms	(1) Syllabus design and implementation (2) Course contents reflects the objective of transforming teaching research (3) Teaching methodology and learning approaches (4) Examination and assessment procedures
	Practical teaching	(1) Construction of a practical teaching system (2) Laboratory and open cases (3) Implementation and effects of practice and training, social practice, and graduation final research (thesis)
	Extracurricular classes	(1) Extracurricular classes system and guarantee measures (2) Community-based and campus culture and science and technology activities (3) Students exchange
Students development	Admission and resources	(1) Institution general resources (2) Students' characteristics and quantity
	Students guidance and services	(1) Student instruction and services (2) Organization and conditions of student instruction and services (3) Evaluation of student guidance and services
	Atmosphere and learning	(1) Measures and effects of institution learning style (2) Overall students' academic achievement and performance quality (3) self-learning and student satisfaction
	Employment and development	(1) The employment rate of graduates and career development (2) Evaluation of graduates employment

Quality assurance	Teaching quality assurance system	(1) Quality standards (2) School quality assurance and planning (3) Organization of the quality assurance system (4) Creation of a teaching quality management team
	Quality control	(1) Content and methods of self-assessment and quality control (2) Implementation and effects of self-evaluation and quality monitoring
	Quality information and use	(1) Participation in a state database (2) Quality of information mechanisms as statistics, analysis and feedback (3) Quality of information disclosure and annual quality report
	Quality improvement	(1) Quality improvement approaches and methods (2) Effects of quality improvement and evaluation
Optional features	Institutions can choose their own distinctive and complementary projects	

Annex 5: Higher institution accreditation quality benchmarks (2012) in Spain

Source: REACU (2011) and ANECA (2012)

Area	Benchmarks
Description of the degree	(1) The name of the degree should be consistent with the curriculum and the professional repercussions. (2) Frame in a knowledge Area: Arts and Humanities, Sciences, Health Sciences, Social and Legal Sciences, or Engineering and Architecture. (3) ISCED Code. (4) Number of credits: One academic year 60 ECTS. Bachelor's degrees 240 ECTS and master degree at least 60 and at most 120 ECTS. Both must include a Final Project between 6 and 30 ECTS. (5) Indicate teaching methods: classroom learning, blended, distance learning or combined. (6) Places offered according to material and personal resources. (7) Languages
Justification of the degree	(1) Degree's academic, scientific or professional interest and relevance. (2) The benchmarks used should be appropriate and directly linked to the degree. (3) The outcome of consultative procedures should evidence a direct link with the degree. (4) The degree should be justified by its context, tradition, the overall offer of degrees as well as the potential of the university or universities proposing it.
Competencies	(1) The skills proposed in the degree should be clearly and accurately described and come into line with their level in the Spanish Framework of Qualifications in Higher Education. (2) Competencies must be assessable and consistent with the corresponding level of the bachelor or master's degree. (3) In bachelor's degrees, competencies must ensure general training in one or more disciplines to prepare students to perform

	professional activities. In master's degrees, the aim is to acquire advanced specialized and multidisciplinary training, academic or professional specialization, or prepare students to embark on research activities. (4) Competencies design must be divided into basic or general, specific and transversal.
Student entry and admission	(1) Pre-registration information systems: including recommended entry profile and dissemination channels. (2) Entry requirements and admission criteria: specification of legislation as well as specific entry conditions or tests established. Criteria must be public and clearly described, as well as coherent with the thematic area of the degree. (3) The credit transfer and recognition systems envisaged must be indicated in order to enable student mobility inside and outside Spain. (4) In the case of official bachelor's degrees, regulations should allow the recognition of at least six degree credits, awarded through participation in university activities related to culture, sports student representation, cooperation and social involvement.
Programme planning	(1) The curriculum (structure, content, training activities, placements, evaluation systems, etc.) should be consistent with the skills to be acquired by the students. (2) The described ECTS will cover all the theoretical and practical training: basic features of the knowledge area, compulsory and elective topics, seminars, work placement, guided study, bachelor or master degree final projects and other training activities. (3) Programme planning will be divided into three sections: general description of the study programme, planning and management of incoming and outgoing exchange students and horizontal and vertical academic coordination. (4) For each module, topic or subject a name, number of ECTS, nature (core, compulsory, optional…), duration, training

	activities, contents, language, teaching methods and evaluation systems must be specified (5) For bachelor: if work placements are scheduled, they will have a maximum of 60 credits and must be offered preferably in the second half of the study programme. (6) Bachelor's degrees should include a minimum of 60 basic ECTS credits, of which at least 36 should be linked to the particular subject matter dealt with in the area of knowledge to which it is related, specified in courses with a minimum of six ECTS credits each and offered in the first half of the curriculum.
Academic staff	(1) Number and conditions of available academic staff specified in terms of profiles and status (PhD holders, professors, senior lectures, full-time and part-time academic staff, research and professional experience….).
Material resources and services	(1) Sufficient and adequate material and resources to implement the proposed curriculum, ensuring its long-term sustainability. Including both belonging to the degree itself as well as available through agreements (areas, facilities, laboratories, scientific, technical or artistic equipment, library and reading rooms, new technologies, etc.)
Expected results	(1) Estimated numerical values for the indicators and their justification: graduation rate, dropout rate, efficiency rate and performance rate.
Quality assurance system	(1) Proposal of an internal quality assurance system to ensure the proper introduction and implementation of the curriculum. (2) Assessment on academic staff, work placements and mobility programmes, graduates' labor market outcomes and their satisfaction with the training received , satisfaction of the various stakeholders and mechanism to deal with their suggestions and complaints, and procedure to ensure transparency and accountability.

Schedule for implementing the degree	(1) Time-line for implementing the degree. (2) Adaptation procedures for students in old plans. (3) Programmes that will disappear due to the implementation of the Degree proposal. (4) The adaptation tables should be public and coherent for both degrees.

Annex 6: Parameters for audit (follow-up) evaluations (2014) in Spain

Source: ANECA (2014)

Criteria	Sub criteria
Degree management	
1. Organization and development	1.1. Entry profile and admission criteria 1.2. Degree competencies 1.3. Academic regulation 1.4. Official legislation 1.5. Study plans-teaching guides
2. Information and Transparency	2.1. Students have access to the pertinent information: study plan and learning resources.
3. Internal quality assurance system	3.1. Quality objectives: clear and being revisable. 3.2. Interested groups, as students and researchers, participate in the degree assessment, analysis and improvement. 3.3. Gathering and analysis of suggestion, complaints and claims.
Resources	
4. Academic staff	4.1. Academic staff list by category and area of knowledge.
5. Support staff, material resources and services	5.1. Material resources and it adequacy to the number of students and activities: classes and their equipment, working spaces and areas, laboratories, libraries… 5.2. If the degree has compulsory external practicum: practicum planning and adequacy to acquire the competencies designed in the degree.
Outcomes/results	
6. Satisfaction and efficiency/ performance	6.1. New students by academic year 6.2. Performance rate by subjects and classes 6.3. Dropout rate 6.4. Graduation rate 6.5. Efficiency rate